

DE BOW'S REVIEW.

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ART. I.—POLITICAL ECONOMY AND ITS PROFESSORS.

* THE word economy (from the Greek *Æconomia*, direction of the mansion,) has a general and a special signification. Domestic economy, or the art of administering one's private affairs, may be termed the mainspring of social or political economy, the science which treats of the wealth of nations, and the art of regulating its government, just as the character of individuals may be likened to the life of governments. To determine her wealth, forms itself, distributes itself, and consumes itself, is comparatively a recent science. Dating from the 16th century, it owes its germ to the *Economies Royales* of Sully, the great financier of Henry IV., and to whom France owes so much. Among the fruits of his reflections was the proclamation declaring for the commerce in grains, the abolition of many useless tariffs and tolls, and the opening of great channels of communication. Following his traces come Colbert, Vauban, Law, Dutat, Milon, economical financiers who constitute the first epoch.

France is the founder and the perfector of this modern science, which to-day claims the attention of the statesman as well as the philosopher, the student as well as the traveller, whose casual observation leads to this first question. If the reader of La Fontaine shows his sympathy for Fouquet, Superintendent of Finance under Anne of Austria, so celebrated by his disgrace, the traveller who admires the *jardin des Tuileries*, the *colonade of the Louvre*, the triumphal ports of *St. Denis* and *St. Martin*, the quays and pavements of Paris, must admire his successor, Colbert, Controller General of Finances under Louis XIX. The disorder and debt of Fouquet he transformed into order and plenty. He re-established manufactures, founded academies, encouraged com-

* Bouillet. *Dictionnaire des Sciences, etc.*

merce, protected letters, arts and sciences, and hewed out the materials for his imperial successor, Napoleon III, whose collective genius and administrative power has stamped him the greatest political economist of our day. The *Landes* of France, and the impetus given to agriculture, attest the influence of Sully and his followers. The Boulevards, palatial squares, and unexampled splendor of Paris, and the railroads and internal improvements of France, prove that the Colberts are not dead for France.

Vauban, cotemporary with Colbert, and the greatest of engineers, gave a new direction to this general science. A power to destroy is a force to preserve; the same genius that changed the face of warfare by the art of sieges and fortifications, invented the *feux-croises*, the *boulets-creux*, the *tir-a-ricochet*, the *cavaliers de trauchie*, and perfected parallels. He accompanied Louis XIV in nearly all his campaigns; caused him to found the order of St. Louis; counselled him to establish freedom of culture, and financial reform; distinguished his country in distinguishing himself, and left as undying memorials over Europe as the towers of Cæsar. His heart rests in the *Hotel des Invalides*, near the Sarcophagus that contains 'le Grand Monarque, Napoleon I. Did not he accompany him in his campaigns also?

What a paradox then is the word political-economy! Theoretically Scotland claims high rank in political economy; and it is a curious fact. Edinburgh sent forth Law and Adam Smith in the 17th century. Law took refuge also in France when he established his bank, etc. An adventurous spirit, he widened the scope of his profession and formed a company, with privileges of commerce with the Mississippi, China, the Indies, the Senegal. His remarkable considerations upon specie and commerce attracted the notice even of the historian Thiers, and his system has materially affected commerce. Dutat, Cashier of the Company of the Indies established by Law, became celebrated by his *Reflexions politiques sur les finances et le commerce*, his endeavor to prove that money has no arbitrary value, etc. The most marked opponent of Dutat was the economical Melon, who, in his **Essai politique sur le commerce*, claimed the prohibition regime and the arbitrary value of money.

The names above cited constitute the first school of economy, in which the chief study was to augment the amount of hard money in a country. The second embraces Quesnay and his followers, who direct their chief attention to the productions and the productive capacities of the ground. Mother

* Called by Voltaire "A book as full as it was concise," *Revue des Deux Mondes.*

Earth furnishes to them a rich mine of treasures, into which they have penetrated with all the implements of research. These *Physiocrates*, as they are termed, consider agriculture as the *point d'appui* and the base of all riches, and to their system is applied the collective term "*agricultural system*."

Turgot, Condillac, Raynal, Condorcet, the Marquis de Mirabeau, Dupont de Nemours, Mouillet, have forcibly supported the exclusive and exaggerated idea of Quesnay in considering Nature as the sole source of wealth. They may be termed, as they termed themselves, the economists of the last century; and, though their thesis does not rest upon a solid base, they have performed much in elevating agriculture and extending commerce. Francois Quesnay, born in 1694, the same year as Voltaire, became first consulting physician of Louis XV; was lodged by him in the Palais de Versailles, and familiarly called "his thinker," (son penseur). The reign of Louis XIV left France more brilliant than ever in Paris and several large cities, while the provinces and rural districts suffered from poverty, oppressive laws and mal-administration, which crushed agriculture. To remedy this evil was his life study. The close observer will see that it embraced all the conditions of life, social, moral and industrial. The dangerous thesis of Milon must be overturned; the charming essay of the *Moulin* of Voltaire must be criticised. At the age of sixty years Quesnay published his thoughts. In the brief space of thirty articles he has condensed the meditations of his life. Public speakers and Congresses exhaust themselves and their hearers by rapid declamation, filling octavo volumes, to which the converse of Voltaire's criticism of the work of Melon may be applied, viz: *aussi ride que large*—as empty as wordy. Quality, not quantity, is the value and test of men's thoughts. * When Quesnay wrote, the price of cultivation absorbed four-fifths of the product; to-day it absorbs only one half; the rent of the soil then only an eighth, is now a third. The proportion of expenses is lowered, that of rents and of profits is increased. To effect this Quesnay labored. Agricultural progress depends on a fair government; though soil in itself is the lever-force of Government. Rousseau proved that the system was bad which made cities rich at the expense of the country, and *vice versa*. Quesnay, in his *Tableau Economique*, gave form and solidity to this idea of Rousseau's. * The Marquis de Mirabeau characterized the then greatest discoveries to be: the invention of writing, the invention of money and the *Tableau Economique* of Quesnay. In the hands of Quesnay precision suffers from concision. Every nation he divides (*Tableau Economique*) into but three classes—cultiva-

* *Revue des Deux Mondes*, Avril 1867. *Idem.*

tors, proprietors and *sterile*. Colbert had given to France industrial power, and extended commerce and manufactures ; but in doing this he had established monopolies, taxes and protective tariffs. All radical legislation overturns itself. Had France remained true to Colbert, she would have sacrificed her agricultural kingdom ; had France implicitly followed Quesnay she might have endangered her internal progress by crippling her exterior commerce. Quesnay's negligence of the importance of mines, etc., is admissible for France, but a pernicious doctrine for such country as Great Britain ; his view as to the "security of property is the ground work of political economy, and will apply to all countries alike. "Liberty and property" said Voltaire, "is the device of the English." Locke first prescribed the formula in his "*Essay on Civil Government*."

Locke's essay on civil government was inspired by the revolution of 1688, and was thus not a French offshoot, nor strictly applicable to France. But the influence of this revolution was well nigh universal. Mackintosh, in his "Miscellaneous essays," says : "The revolution of 1688 serves the attention of the philosopher more from its indirect influence on opinion than the English Government. It was the first exhibition of the union of political with civil liberty, and stability with peace. Europe was an asylum for freedom of thought. Hence England became the preceptress of the world. Hence arose the school of sages who unshackled and emancipated the human mind, from among whom issued the Lockes, Rousseaus, Turgots and Franklins. They operated a great moral revolution, which, in due time, ameliorated social order.—The Colossus of Tyranny was undermined, and a pebble overthrew it. With this progress of opinion arose the American revolution, and from it the French revolution."

Liberty and security of property was the essence of the system of Quesnay. "There is nothing new under the sun." It is interesting to observe the analogy of revolutions. Civil wars in their effects bear singular resemblances. The human mind, like the currents, has its ebbs and flows. Popular prejudices, the opposition of the poor versus the rich, the ignorant versus the intelligent, has existed at all times and in all countries. But not only is this true with reference to the moral but to the national, also. Quesnay opposed destructive imposts, even to the suppression of all indirect taxation,

* Says Quesnay : "That the security of property and household wealth should be preserved to their legitimate possessors, as the surety of property is the essential base of economic order and of society. It is the certainty of permanent possession that provides labor and the employment of wealth to the amelioration and benefit of the ground, and to the enterprise of commerce."

except that of the *Douanes*. Napoleon I had need of gold to carry on war, and established his *droits reunis*. Quesnay advocated the continuance of large landed estates ; Napoleon III has effectually destroyed them. Colbert, reign of Henri IV, had interdicted the exportation of grain, (1660;) *Quesnay declared : "The more we sell cereals the more we produce them, or *tel est le debit, telle est la reproduction.*" In 1861 the law granted free exportation, and finally general free trade. Quesnay opposed the attempt of Government to regulate the price of agricultural products, and advocated *le prix naturel*, that the struggle between production and consumption should be left to itself without any pressure on part of Government. "Abundance without value is not riches." †"Grain is more dear in England, Belgium, Holland and part of Germany—richest countries in Europe. Grain is cheaper in Russia, Hungary and Spain—the poorest countries in Europe." Do we not see analogies since our last American war ? Does not history repeat itself ? The economic results of Quesnay's theory have been proved in Europe ; will they be verified in America ? Entire liberty of commerce, *free trade*, was the principle which, sent forth by Quesnay, has well nigh encircled the world. America, progressive in other matters, is blinded by a false prosperity. How applicable is one short clause : "Que l'administration des finances, soit dans la perception des imports, soit dans les defenses du Gouvernement, n'occasionne pas de fortunes pecuniaries, qui derogent une partie des revenus a la circulation, a la distribution, et a la reproduction." Well may we also condemn *les abus*, the improductive expenses of the State ! Another principle announced by Quesnay in his essay "Du Droit Naturel," may be generally applied, viz : that economic laws are not dependent upon form of Government, provided the Government is good, without which general economy cannot exist. "Then, when the laws and the tutelary form do not assume liberty and security of property, there is neither Government nor profitable society ; there is only domination and anarchy, under the semblance of Government ; positive laws and domination then protect and assume the usurpations of the strong and the annihilation of the property and liberty of the weak." Upon this subject Condorcet against Voltaire also writes : "Those who have said first that the principles of the administration of States ought to be the same in monarchies and republics, have been useful to men in showing them that happiness was nearer than they imagined, and that it is not in overthrowing the world, but in enlightening it, that they may hope to find prosperity and liberty."

**Revue des Deux Mondes.*

†*Revue des Deux Mondes*, "Quesnay et ses Maximes."

We have seen that the two first epochs of the science of political economy possessed each a different and central idea. The first, commercial and financial, sought to augment the *hard money*, or specie, in the country. Its professors were appropriately designated *economists financiers*. The second had for its central object the development of the agricultural wealth in all its bearings. Their thesis was that soil controlled Government. It is difficult to say to which we owe the most, as each had its particular development. The internal commerce of France to-day is, perhaps, regulated by a more perfect general system than elsewhere. Her agricultural progress, except in limited districts, is apace with that of science, and embraces a talent and energy which vies with, if it does not excel, that of the rest of the continent. The vast sterile plains (*Landes*) of Bordeaux, de la Gironde, Sologne, Anjou, Bretagne, etc., are partially reclaimed from the seas. Near the Bay of Biscay and onward, the sea's domain is being encroached upon, and then even Holland has its competitor. If they reflect credit on the energy of Napoleon, no less do they exemplify the wise foresight of the sage of Versailles. It was necessary that these two extremes should have a mean. Adam Smith, in the north of Europe, animated by this study, which had changed Europe and extended its influence across the seas, established the present and ruling law of economy. In his "Wealth of Nations" he asserts and proves that *labor* is the only source of wealth, but the capital has four different destinations: agriculture, manufactures, general commerce and commerce, in detail. He has generalized the two systems without taking from the value of either. He gives to agriculture the preference in the application of capital; then comes manufactures as next in importance, "which will put in activity the greatest amount of productive work, and which will add the greatest value to the annual product." Commerce he proves to be, like manufactures, when revenue comes from exportation, etc., a precarious and uncertain species of wealth. "A merchant is a citizen of no particular country." "The Hanseatic cities were formerly immensely rich, and now no vestige of their pre-eminence remains."

This idea of Condorcet's seems chiefly based on what is termed the right of people, and it is this common, but* to a degree false credence, that to-day threatens to undermine the institutions of England. The natural antagonism between capital and labor is parent to the unnatural demand for unlimited suffrage and abolition of all caste and privileges. There

*John Bright would have the State acquire, by fair means, the half of the land of the great proprietors of Ireland, in order to establish small land owners in their places. The result would be the absorption of the small proprietors by the large ones.—[Edinburgh Review.]

are two terms well nigh indefinable, as each is the creature of circumstance, viz: *labor* and *popular right*. While we admire the independent spirit that animates the "Associations of Working Men" in England, we should not overlook that the secret of their prosperity—the solidity of English institutions—can successfully repel the encroachments of one hundred thousand working men, led on by demagogues, and clamorous for "reforms." Other nations have this anarchic element, but what other can persuade these masses to peaceably disperse until their demands are acceded to or rejected by the conservatism of land?

Now, so long as labor has existed—and "Father Adam" was condemned to labor—and so long as it shall continue, *inequality* will necessarily reign with it. Civilization in its progress will no doubt bear with it amelioration for the condition of the working men, but it cannot suppress the vocation. Individual merit will cause individual success, under whatever form the labor may work; but capital will ever master labor. Before the middle ages, liberty united to equality never existed. Force was the only law. Roman corporations were instruments of oppression; the corporations of to-day have for their object resistance and defence. Christianity has established, or will establish, the proper equilibrium. Turgot tried and failed to abolish corporations as vicious in tendency. The National Assembly (1791) suppressed them with the cruelties of the working men. Since the French revolution, the boasted champion of popular rights, taxes, privileges, monopolies still reign, and, to a degree, will (it seems the natural order) ever reign. Political economy may regulate industry, elevate labor, enhance happiness, but it is not in the nature of things that it should produce a political millennium.

The American economist must venture beyond the fields explored by his European predecessors. The maxim of Quesnay with reference to *a population he cannot accept; Adam Smith's opinion of Government loans must be carefully weighed. "When the national debt has once attained a certain point, there is no instance in which it has been legally paid; the liberation of the public revenue has never been made except by means of bankruptcy, opened or disguised." Political economy is wholly dependent on population. Population regulates itself by subsistence, subsistence is dependent on industry, and industry is controlled by climate. France, in 1750, contained (20,000,000) twenty millions of people; in

* That one should be less attentive to the augmentation of the population than to the increase of the revenues, as the greater comfort which great revenues procure is preferable to the pressing need of subsistence which a population exacts that exceeds the revenue.

1790 it had exceeded (26,000,000) twenty-six millions of souls. During this time agriculture had doubled its products, and the rent of land had quadrupled in value. The problem of pauperism, increase of population, etc., when Malthus wrote in France was so urgent, that he says: "there is no longer place for the new comers to the banquet of life." How incalculable seems the distance when an American can apply this maxim to America! Of the eastern confines of Prussia, the delta of the Vistula, district of Mariennerder, etc., is rich; the *province* is not rich. At 54° latitude vegetation is short lived; the severe climate grants but a short labor period, and exacts vast expense, which is useless after a long winter, and impaired by a short but burning summer. As a consequence, population is thin and scattered, which prevents interior communication. The result in toto is that the net product is low, which, in turn, lowers the price of land. The average population for the whole kingdom is 3,771 inhabitants to the square mile; it there reaches only 2,559.

As a further illustration we will take Silesia, another Prussian province. The south is shut in by mountains—the Euler and Reisen-Gibige—cause a rude climate and sudden temperature. Harvest is late, the labor period short. The farms are small and divided. In Lower Silesia the climate is less rigorous, the labor period is longer, the farms are large, and the people well-to-do.

Of the contrary, Adam Smith proves that a country possessed with agricultural resources need never become impoverished nor depopulated. He instances Italy and Flanders, when war had destroyed commerce and manufactures; but they are no less peopled to-day than formerly, because in taking care of agriculture it had taken care of them. The best cultivated countries of Europe are the wealthiest; yet they have suffered every variety of commercial misfortune. "The revolutions of war and of Governments destroy the sources of riches that spring from commerce, that which proceeds from the solid progress of agriculture is of a nature far more durable." His chief example in support of this is America, "where," he says, "up to the present time all capital has been employed in agriculture." America has changed too much since then to warrant the assertion; but America is still in transition. After two centuries America may verify his sagacity, as France has verified that of Quesnay. But for America the political economist must be an American. For this great virgin continent the science is sleeping in its cradle; its cradle is being rocked by revolution. The difficulties with which it has to struggle is a combination of all that has preceded it. Until commerce shall have a common basis and a common language, its finance must be as distinct from that of

France as its republicanism differs from that of the republics of antiquity. To have a thorough political economy there must exist a national feeling ; the United States do not constitute a nationality.

Commerce, if the dogmas of the first economists were correct, would probably produce a cosmopolitanism ; but neither commerce nor coin adjust the American balance. The four sources of Adam Smith must be blended or generalized in turn before America can claim its especial eminence in this science. The legislation suitable for New England can no more be justly or profitably applied to the South than that of Scotland or Prussia can to France or Spain ; nor can the affairs of the Pacific States be any more controlled by the laws of the West than the Orient by the rest of Europe.

Political economy is above all a comparative science. The Old World—cultivated by time—its dense populations enriched by science, is the lamp of experience, for the New World is yet in its infancy. The American mind is prone to console itself by the “flatteringunction.” Even in politics we are fighting old battles. Agrarian Utopias have agitated and exhausted themselves in the Old World as they will in the New. *Far i castelli in Espana* is an universal weakness. The casual observer accepts too early a fact without seeking its corollary. He sees the wonderful prosperity of France, (until recent years France was, agriculturally, in the back ground, and even now, in some parts, a very primitive mode prevails), since it has become a land of little proprietaries, and concludes that large landed estates are vicious and impoverishing. Let him extend his travels to Germany. Over almost all of Hanover, more perhaps than any other part of Germany, the same system prevails. Yet Hanover presents the most primitive modes of agriculture. Let him not be disengaged ; each can claim its political economy. In France it is the effect of a general cause. The same system that regulates her manufactories moves the plow. In Hanover the climate is cold and humid, yet the people seem contented and in easy circumstances. Agricultural association form agricultural laws—laws because they are rational. * “In one year (1863) these associations transformed the form of cultivation of 771 farms, situated in 302 communes.”

A discovery or an amelioration becomes useful only when it is accepted as useful. The application of economic reforms is only next difficult to their suggestion.

Thus political economy acts as a check in one clime, and a motor in another, each applied to the same object, and each striving to attain the same result. Is it not this idea that

* *Revue des Deux Mondes*, Juin, 1867.

gave talismanic meaning to the these words—*E Pluribus Unum?* Were not the hardy sages of '76, who gloried in the appellation Rebels, true political economists when they declared that the general Government was incompetent to control the domestic affairs of separate States, when the strongest tie to the Federal bond was this indispensable liberty?

Population in America doubles every twenty years; Great Britain can afford to send forth one hundred thousand emigrants during the same period. France is almost at a standstill point; her population neither decreases nor increases sensibly. The one is due to emigration and a virgin soil; the second to her unequalled geographical position and her Anglo-Saxon discipline; the last is due to her Catholicism, her hordes of monks and celibates, the disruption of the social and moral system, and her standing army. Now it is as easy to reconcile these discrepancies as to make one general law apply to all America.

America is still a virgin continent. Science there has scarcely attained its foothold; the rough stone is scarcely hewed from the quarry. Some remarks of Jean Baptiste, say one of the most recent economists, seem peculiarly applicable here: "National population seems uniformly proportionate to national production; but it may vary locally *within the limits of each State*, according to the favorable or unfavorable operation of local circumstances.

Nothing can permanently increase population except the encouragement and advance of production; and nothing can occasion its permanent diminution but such circumstances as attack production in its sources." Attack manufactories with high tariffs; it results to their injury, which in time injures the consumers. Tax unduly the raw material that gives aliment to manufactories or the capital occupied weaving, the looms become idle; suffering and want weigh down laborers for lack of labor. Take for example the article in most universal demand, and most necessary for the vestment of man—cotton. From the time of Herodotus it has been worn. Before the Christian era there were factories in Egypt and Arabia. The Chinese cultivated in the 13th century, when cotton formed an important article of commerce between Turkistan and the Crimea, up to Northern Russia.

In Italy there were factories in the 14th century. Belgium occupied itself thus in the 16th century. France and England embraced it, and well nigh monopolized it in the 17th Century. The United States took measures to compete with them. The Southern States gave to the early original settlers, the Cavaliers, Huguenots, etc., the finest clime in the world for this and other agricultural products, which the energy of their descendants have made one of the chief commercial indicators of the world.

Now, what would be the result of a diminution in the American supply? Foreign competition would ultimately shut out its exportation in a sensible scale. American cotton would cease to be indispensable to Europe. Cotton has not ceased to be king, but it has ceased to be an American autocrat. The demand for this prime necessity during the war in America caused new fields to be sought out. The cotton culture has crossed the seas. The greatest maritime power in the world has become its producer as well as its consumer. *British India contains 1,466,000 square miles, with a population of 150,000,000 inhabitants! The importation of the products of India amounts to £40,000,000 sterling! the exportation from England to India is half this amount. The Hindoo Cipayes are of timid character, and are inferior, morally and physically, to the European race that dominates the vast country. The wealth of the wealthiest of empires furnish all the appliances of modern science, and strains every nerve to establish a pre-eminence. They are rapidly opening ways of communication, and the problem before them is to produce the largest supply at the least cost.

Egypt threatens to compete seriously, also. *The Egyptian cotton supply has increased ten fold in ten years!

In Cochin-China the French colonies, with a million industrious subjects, cultivate cotton successfully, and on a gradually increasing scale.

It is readily seen that the American cotton culture needs encouragement rather than the burden of taxation.

But leave the South to itself; let prices seek their own natural limit, which is the only healthy one, and our country can compete with the combined efforts of all its rivals. Look upon the map; trace out the boundary lines of the late Confederate States, and no similar area in the world can be found capable of producing an equal result. Her noble rivers, her mountain chains, her fertile valleys, her extended plains, and climes that unite the blessings of all. Though bankrupt and impoverished by a gallant but ineffectual war, if left alone to carve out her destiny unfettered by class legislation, that destiny will be almost incomparable. †

*Bouillet Atlas d'Histoire et de Geographie.

† The Southern States possess agricultural advantages over the Northern and Western—almost the exclusive advantage of producing cotton, hemp, rice, sugar, and other products of the lower temperate zone—with longer shore lines than any other sections, climates for market gardening, fruits, forests of valuable timber, waters teeming with fish and crustace. Between tidewater and the lowest mountain slopes is a region producing better wheat than the entire range of farm feeding, with such fruits as apples, pears, cherries, grapes, etc., etc. The mountain regions are almost unappropriated and unknown, varying from 1500 to 6000 feet. It is the great grazing section of North America, sufficient to afford abun-

The South furnishes all the cotton consumed in America. More, its product is indispensable to Europe. Every industry in Great Britain felt the lack of the cotton supply during the war. Further, it is the mainspring that runs British manufactories, and British manufactories lead the commerce of the world. Stop the American supply, and the whole of 2210 establishments are comparatively clogged; 28,000,000 of spindles, 298,000 looms, and a population of 387,213 British laborers are materially concerned. In France, 300,000 laborers; in Austria, 400,000 laborers are similarly engaged, and industry feels everywhere the pressure. To tax such a community out of existence, or to materially cripple its production, would lower American commercial prestige and New England prosperity more effectually than any other tariff. It would be but a repetition of the logic which animated the peasant to kill the hen that laid the golden eggs, as is recounted by the fabulist. Theoretic deduction is a dangerous fallacy, when carried too far. **“The taxation of an article of prime necessity operates upon the price of almost all other products, and consequently falls upon the revenues of all the other consumers. But the adventurer or master-manufacturer may, in many cases, liquidate this account and transfer his labor and capital to some other quarter. Not so the land owner and proprietor of fixed capital.”

M. Canard has received a reward of merit from the French Institute for advancing an idea that has evidently fastened itself on American legislation, viz: “That it is of little importance whether a tax press upon one branch of revenue or another, provided it be of long standing.” In opposition to this, Say says: “The owner of land will never be liable to saddle the consumers of its produce with any part of his land tax. Not so the manufacturer. A manufactured commodity will invariably feel a diminution in its consumption, in conse-

dant pasturage to millions of cattle and sheep. They are generally free from surface rocks, covered with forests, and fertile to their summits. In bodies of thousands of acres, their pastoral areas await the advent of the dairyman and the herdsman, at prices not exceeding those of the public lands of the West. Even in the eastern slopes of the Blue Ridge, in proximity to railroads, whole counties together have little more than 10 per cent of their territory in a state of nominal improvement. There are grounds, also, for assuming that they must ultimately become the great wine producing sections of the country, for observation and experience attest that the higher, colder and more humid latitudes will not ripen to perfection the wine-producing grape. Of the area not in farms, nearly 300,000,000 acres; nearly two-thirds more are unimproved, and less than 75,900,000 nominally improved—but 13 per cent. of the whole, and not half of this in actual cultivation. It is safe to say that not more than 5 per cent. of the area of the South is annually cultivated.—[Report of the U. S. Commissioner of Agriculture.

*Say,

quence of the price being raised by taxation, supposing other circumstances to be stationary. A person who is neither producer or consumer of an object of luxury will never bear any portion whatever of the tax that may be levied on it." Had Radical legislation been controlled by wisdom, justice and moderation, during the past two years, the sufferings of millions, the desolation of vast districts, would have been prevented, and the finance of the United States would ultimately have gained by its choice.

The heavy burden of the great slave establishment—the most expensive system in the world, considering the net product of soil—has relieved the country of an incubus, unfelt at present, but to become manifest at no distant period.

When labor becomes submissive to law, when capital can command it upon a rational basis, and free trade give impetus to the combined result, then the expense of the "old regime" will show itself. With a reform of the present anarchic tyranny will come a reform in labor regulations, ameliorating to the laborer and profitable to the landed proprietor. Those alone must consume who can produce; the support of the aged and infirm must devolve on the State; that of the children on the parents. What a weight from the shoulders of the planter!

Labor-saving machines can now with profit be introduced. In a few years, fifteen laborers should perform the work of thirty ten years ago. What, then, will become of the balance left without employment? When sewing machines were invented, how many thousands of poor women and workmen were thrown out of employment? To-day there are probably two fold more thus employed than prior to its introduction; and thus it is with every labor-savor. Increased production is always followed by increased necessities; it is a law of civilization.

But the new system involves a new political economy. "Squatter sovereignty" must cease; the vast forests near our cities must no longer be blindly destroyed, to satisfy the idle cravings of unauthorized adventurers. Plantations of thousands of acres must no longer be food for individual avarice alone, regardless of public welfare, merely because there are virgin forests and a virgin soil to be equally ransacked and plundered "for the asking."

Turn, again, to Asia for an example and a warning. Until a few years back, the forests of India were only considered obstacles to the development of agriculture, rather than a source of revenue. In 1846 the English Government seized all forests for which the occupants could show no authorized titles. *In Birmanie there are 619,000 hectares of forests of

**Revue des Deux Mondes.*

teak wood, (a hectare is two acres, one rood and thirty-five perches.) In 1861 they brought to the Government 936,648 francs. The expense was 760,710 francs ; the gain, therefore, was in one year 175,938 francs.

* The forests of India are not as imposing as the American forests. One does not see there unlimited tracts with trees pressing the one against the other, and interlocking their branches, forming a foliage that presents ever increasing obstacles ; one does not meet in solitudes, where no human being has penetrated, those giants of vegetation which, adding each year for centuries a new forest cover to the ancient leafy couches, by attaining almost incredible dimensions. As they have required centuries to grow, they take centuries to die, losing gradually their branches, they lose their sap, and leaning on themselves, restore to the soil at one blow all that they have taken from it during the series of years, and making in their foliage a *vide* that new trees come soon to replace. Nature in India has not this majesty ; the grounds uncultivated are only abandoned lands ; the forests already many times explored, are interspersed with scattered villages, that seem to date from the earliest times of humanity." Why then should we totally neglect the vast treasures within our grasp ; why destroy needlessly that which cannot be replaced. Take any American city of thirty years' standing, survey its *alentours*, and contemplate the result of it, continue in the same ratio for a century. Consider any State in the Federal Union that has no coal beds nor peat bogs, and see if it is an idle reflection. Any one familiar with the old culture, any Southern planter will readily perceive our past improvidence by comparing it still further to India. The mode of culture that is called *kumari* in Malabar, and *tonugga* in Birmah, is disastrous. Practised anciently by savage tribes who inhabited the jungles, it has extended to the peasantry, and to-day is generally spread. *It consists in clearing a certain extent of forest, as much as possible on the flanks of a hill, to leave the wood to dry on the spot until March or April, and then burn it ;* they then cultivate lightly the soil, in order to bury the ashes, and then sow corn or millet by the first rains. The result is a double product. The second year produces a crop ; sometimes the third, after which the place is deserted and abandoned to jungle.

We, Southern planters, have always indulged in a species of *Kumari* almost equally reckless, though we are not grappled by jungles. It is worse than folly to continue the system, or rather, want of system.

Cotton is only our greatest staple. A country so extended,

with noble rivers ; so blessed by nature ; so wonderfully recuperative, has illimitable resources. Let us pierce our mountains, extract our minerals, open our quarries, make railroads of native iron, and manufacture our cloths from our native materials. We of this generation may only hew out stone from the quarry ; those who come next will fit them together. But in giving impetus to enterprise we enhance the comforts of life, and pave the way for domestic independence. Let us enquire into the modes of culture, and the products of similar climes. What a variety of product we might contribute to the commerce of the world ! What an item we might become in the life of nations ! No wonder that a people so dependent upon external aid for the simplest items of domestic use—no wonder that they, though inspired by the loftiest patriotism, and distinguished by the noblest valor—no wonder they were conquered who thus conquered themselves. Take the South of Europe, take the South of Asia, take their products and transplant them here. In the sandy plains of India is an isolated plant, giving to the *pagsaue* a melancholy shade—it is the *Agave Americana* or *American Aloe*. North of the Himalaya, in the immense basin of the Sanpoo, are magnificent forests of *cedrus deodorus* (*cedar deodora*.) Have we not the same species here ? If true of trees why not of agricultural products ? Cotton and sugar are chief staples there as here. Of course there is a practical limit and a practical time—these are only indicators of the idea. Where are the Southern vineyards ? where her Irish potatoes, etc. We might carry the investigation to a considerable extent.

“ In 1789 France possessed one million and a half (1,500,000) hectares planted in the vine ; in 1849 she had 2,192,939 ! In 1788 the harvest was 25,000,000 hectolitres (22,009,668 Imperial gallons) ; in 1858 it had reached 45,000,000 hectolitres. The culture of the Irish potato in 1815 reached 21,597,945 hectolitres ; in 1857 the product was five times as great.”

“ In 1828 France only fabricated 6,000,000 kilogrammes of sugar, and consumed only 2,600,000. In 1859 she manufactured 132,651,000 kilogrammes, and consumed 80,000,000. The Southern States are capable of supplying an abundance of variety and a variety of abundance.

The most important subject to general economy is beyond question that of international exchange. No countries are more particularly interested in this than the United States and England, owing to foreign commerce. Germany is fast accepting this as the one indispensable need. Until this is done with regard to her domestic economy, terrible confusion and needless expense will continue. One of the most evident

* Du Condray *Europe contemporaine*.

marks of the spirit of our age is the monetary convention recently concluded between France, Italy and Belgium. The tourist may now traverse from the exterior limits of one to that of the other by means of one same money. The cause for this addition to his comfort has for its general effect the alleviation of the minutest details of finance. In these days of railroads and steamships, a nation can no longer possibly enclose itself by the barriers of *egoisme*. Cross the Rhine; travel from one great European capital to another—it is an affair of a few hours only—why should the inconvenience of exchanging the Rhenish florin for the Austrian, the silver groschen to the Kreutzer, the Kreutzer to the Prussian thaler and this through the seemingly endless labyrinth of German money?

The same spirit that has consolidated the little duchies—that has made Posen, Pomerania, Brandenburg, Silesia, Saxony, Westphalia, Nassau, Sleswig-Holstein, Hesse-Electoral, etc., all Prussia—Prussia that has swallowed up Hanover also—will one day not distant sweep away these monetary vestiges of feudal times passed away—Jean-Wolfgang. Goethe in his grand drama, *Götz de Berlichingen*, surnamed the hand of iron for his glorious services in the wars between the Electors of Brandenburg and Bavaria, at the commencement of the 16th century, deplores a war between German and German, and animates his chivalric hero with that noble yearning after a common nationality, which now so agitates with generous enthusiasm the whole *Faderland*. In vain with sectional animosity—the unsocial hate of civil war—do Prussians combat Austrians, etc. Germany is one people, one autonomy, one language, one race, and the most intelligent in the world, and will surely be a great Empire.

*In Germany, in the sixteenth century, another writer, inspired by an Utopia of universal fraternity, in his dreams prophesied what will possibly become a reality. The landgrave of Hesse was part a fool, part a prophet, when he wrote:

“ Hatten wir aber einen Glauben,
Gott und Gerechtigkeit vor Augen,
Ein Gericht, Maas, Munz und Geld,
Dan stunde es besser in dieser Welt.”

“ If all men, elevating their regards towards God and towards justice, had the same beliefs, *the same weights, measures and moneys*, all would go better in this world.

The civilized world is fast attaining cosmopolitanism. The worlds are being drawn together. The world entire, from Russia to Brazil, from Turkey to the Indies, from continent to

its sister continents, is being transformed by commerce. But a few years ago no human being permanently lived in the desert of Suez ; only the Bedouin there galloped his steed, in the traces of caravans near the waters of lake Menzaleh. Where these waters then rested, a city of ten thousand inhabitants stands. Near Port Said, this city that seemingly sprung into existence by the magic of Aladdin's lamp, the Isthmus of Suez flows. One of the neighboring indentations is called the "*Bassin du Commerce.*" Of what are the *digues* (dikes) of Port Said composed ? Stones are rare in the Isthmus. The Company of Suez has made artificial stone ! The blocks are formed of sand and lime of Theil ; placed in moulds, they are dried by the Egyptian sun ; again immersed after two months' bleaching, and gain their final consistence by the action of the sea. Each block weighs 25,000 kilogrammes, (a kilogramme is 2 lb., 3 oz., 4428 drams avoirdupois ; 2 lb., 8 oz., 3 dwt, 2 gr. troy.) The Isthmus tends to connect the waters of the Mediteranean with those of the Red Sea. "The Suez canal from the plateau of El-Guisr traverses the great Menzaleh lake, then the lakes of Ballah, to-day without water. It passes through El-Guisr, encounters lake Timsah, then the Serapeur break, the barrier on the versant, which regards the Red Sea in the great salt lakes, and in the plain of Suez."

Under the hands of industry, guided by science, the desert has given place to laughing edifices, and the sterile waters to gardens ; the water and the sun of Egypt will do the rest. At the junction of the maritime and the fresh water canals, the verdant tract advancing from the banks of the Nile, across the sands towards the center of the Isthmus, is the valley of Gessen, of the Bible.* "There Jacob and his sons, called by Joseph, were established in the land of 'pasturages.' It is from there that the great emigration of the Jews, directed by Moses set out. His itinerance, recounted by the scriptures, may be followed now, step by step."

Should we not be proud of our century, that crosses the Pyramids, tunnels the Alps, intersects a continent with railroads, studs the seas with the sails of commerce, and flashes underneath the Atlantic a message from America to Europe ? * "To-morrow, perhaps, a hardy blow of the pickaxe will detach North America from South America, to open a more direct route for vessels from London to Yeddo, from Bordeaux to Canton."

Could an American feel the impulse that prompted the hero-heart of Goethe's "Goetz-de-Berlichingen ;" could Radical hate cease to execute Radical wrong, and justice triumph,

* Catalogue and Diagram of the Universal Exposition at Paris, 1867.

† Ducondray.

encouraged by the Swiss motto "*chacun pour tous, et tous pour chacun* ;" could the noble valor of a people, animated by patriotism, find a manly sympathy on the part of the hordes that overwhelm them, and they, in turn, appreciate the honest masses of Americans whose opinions differ, but whose charity political "guides" have misdirected and covered up by the tyrant's cloak of prejudice—what a glow of pride would greet his thought of his own California, the American *El Dorado*! Ceded to the United States in 1848 by Mexico, watered by the two splendid rivers, the Sacramento and the San Joaquin, California shares almost every clime and production. The massive Sierra Nevada range; the intermediate chains with their numerous fertile valleys, intersected by water-courses; the beds of its rivers and the depths of its ravines abounding in gold!

Gold has been known since the earliest antiquity. The ancients drew it from Thrace, Macedonia and Arabia. It has been for all times and people a source and representative of wealth. It is found in Piedmont, near Salzburg, in Brazil, Mexico, Peru, the Dauphine in France, but above all in California and Australia. It has an accidental existence in the silver mines of Hungary, Peru, New Granada, Mexico; in the copper mines of the Hartz mountains and in Sweden. It is sought for in Chili, Columbia, as well as in Liberia and in the Ural. As with gold, so, also, with silver, the New World is the reservoir for the world. The Guanajuato mines in Mexico are the richest in the world. Lake Superior and different parts of the United States rank next in value.

The relation of gold to silver has varied from time to time. The present equivalent is in France 15-5 to 1, or gold of equal weight is worth 15 1-2 times more than silver. The French metrical system is considered the most convenient, and is being generally adopted. The system of decimals, the weights and measures of France* are now current in Belgium, Switzerland and Italy. This was accomplished by the monetary convention of 23d December, 1865—a treaty which only regulated economic interest. By this contract, every debtor in States named can pay his debts in gold or silver at choice. Now, in England, all payments exceeding two pounds sterling (£2) must be paid in gold. In Holland and Germany, silver is the standard, and legal payments are made in this metal. Now, although the law of France gives an arbitrary relative value, the real value fluctuates there as in America, though to an exceedingly less degree, on account of the absence of general paper currency. Before the discovery of the *placers* of California and Australia, gold was worth more than 15½

**Revue des Deux Mondes*, Avril, 1867.

kilogrammes silver. Silver was then almost the sole agent of circulation. Gold was a money of luxury, as it became with us during our war. When gold rushed in upon the European market from California and Australia at the rate of 500,000,000 francs a year, silver began to have the premium, owing to the great demand for it from India. *From 1852 to 1860, 1,500,000,000 francs, exported from France, were replaced by 2,500,000,000 francs of gold during same interval.

The same reckless extravagance that we have noticed characterized Southern agriculture, colonized California. Now, though the gold fever is not so enchanting, nor so alluring the sudden great yields of the "placers," the amount produced is far greater, the system improved, and life more regulated by a judicious application of the principles of law. In 1848 the mines produced \$5,500,000; in 1849 it had reached \$40,000,000! in 1854, \$70,000,000! Scarcely in the dawn of its existence, California in *ten years* made the most marvelous progress. Its population is already 500,000 inhabitants, among whom, however, only 300,000 are Americans. European science assists American energy. San Francisco, which possesses a magnificent bay, is a city of 80,000 souls! California commerce extends from America to Europe, and to China. Nothing has so served to bring China within the pale of civilization as California, even though it is scarce yet an adult—if we can employ such a metaphor. It produces more grain than it consumes; more barley than all the United States together. It exports its woods, the products of its mines of mercury, its linens, its leathers, etc. As an evidence of public instruction, it possesses thirty-two public libraries. What a glorious record in the arts of peace! what an eulogy to commerce! what a monument to American energy and enterprise! Away with despondency! Let the same unconquerable spirit which sent our thousands to their early graves—the same heroism that cost us our fortunes and our homes and kindred in such myriads—animate the survivors to build up their shattered fortunes.

We adduce California as a double illustration: one has been given—the other is its influence on European economy and international exchange. It is, also, the only existing American proof of the advantage of a healthy currency in coin, based on specie value, as compared with an inflated paper currency, increasing its bulky value, paralyzing commerce, and held up by high tariffs.

*Westward the course of empire, eastward the metallic current, has made its way from the earliest antiquity. Inverse ratio, California then (1850) caused Holland and Switzerland

to adopt a unique and uniform silver currency—the one franc piece. French influence restored gold money to Switzerland in spite of the law. Switzerland first felt the inevitable necessity; Belgium first proposed; France finally and conjointly with them and Italy, established the present relative value of little money, (one and two francs and fifty centimes.) The Pontifical States and Roumania are ready to enter the new order. The first step of a united Germany would be to this end. *The American dollar is equal to five francs eighteen centimes; reduce the eighteen centimes, and the object is achieved. But the paper money; but the Government bonds; but the "greenbacks;" ah! "there's the rub!" *Austria is disposed to enter the union; all Germany will find it difficult. In Spain the doubloon of 100 reals is equal to 54 francs, 84 centimes—about the same reduction as for the American dollar. Already Chili, Equador and New Grenada very nearly approach it. The reduction will be less felt in America than elsewhere. She is destined to be the most puissant monetary power in the world. Even were it otherwise, the Piedmontese *livre* was "naturalized" into the new union without much difficulty. *The English system is an exceedingly inconvenient one; it is based on the duodecimal system instead of the decimal. The statistical congress of Berlin (1863) and London (1860) pronounced in favor of an international money, based on the "system mélique." The convention of 1865 (*mumzverein*) comprised a group of sixty-eight millions of people in favor of a universal monetary confederation. *If it succeeds, it will embrace the west of Europe, the south of Asia, and all America. The death of Prince Albert was a blow to England in this respect. The "Exposition Universelle" of 1867 will probably prove the sagacity of the Emperor Napoleon III as a political economist. There, at the universal concourse, the flags of all nations floated in peace, every nationality was drawn to a common center—that center was the progress of civilization. Let us profit by this "progress of civilization." At the next conourse of nations, let the South be represented. (Want of familiarity generally with other parts of the United States forces us to confine our attention to the South.) Let a State geologist, or a State chemist, or a patriotic *savant* of any kind reflect upon this world's exhibition of the collective products of the world, and what reforms could be instituted! "Everything but population within our grasp." What food for reflection the tables covered with little morsels of cotton, placed in the English department. These little fibres that have crossed the different seas and oceans, represent the industry and the power of nearly every human race, and afford daily life to millions on millions. Yet the

**Revue des Deux Mondes*,

chief ideas of its present culture; the most valuable seed for its general production, comes from a country scarce half a century inaugurated—our own South.

** Cotton seed, *chiefly American*, has been supplied to the following places, viz: Constantinople, Bagdad, Egypt, the Caucasus, south of Spain, Majorca, Algiers, Greece, Italy, Bombay, Calcutta, Kurrachee and various parts of India, Singapore, Phillipine Islands, Cape of Good Hope, Senegal, west coast of Africa, Canary Islands, Fernando Po, Berbice, Antigua, Cuba, Porto Rico, Nevis, Toboga, Barbadoes and other places in West Indies, Bahia, Sao Poolo, Rio Grande and various places in Brazil, Peru, Berdiank, Bucara, Friendly Islands and Queen'sland! Your committee have supplied cotton gins to the Seychelles, Rangoon, the west coast of Africa, Calcutta, Barbary, Tacua, Peru and Fejee. The damage done to Brazilian cotton by the sun induces us to recommend the use of the Macarthy gin," etc., etc.

The time must come when true economy shall dictate the opposite to some of its maxims of its primitive age. The tie of commerce is stronger than that of prejudice; the more perfect the one becomes, the more complete will be the estrangement. Formerly, in civil, as well as in political life, federal ideas predominated. † Said Montaigne: "*Le profit de l'un est le dommage de l'autre*;" "and I cannot," said Voltaire, "desire the grandeur of my country without wishing for the abasement of its neighbors." Interchange of commerce, letters, *people*, in short, has effectually proved that this philosophy is of a time past. General prosperity is dependent on reciprocal relations, and this latter upon reciprocal esteem. In America, when in the daily business of life, the Irish emigrant jostles the German emigrant; the Italian with his antipode the Dane; the Spaniard with the Frenchman; the Celtic, German, Slave and Latin races all contesting with the Anglo-Saxons; the mutual point is that self-profit depends on the profit of others. "*Labor omnia vincit.*"

The broad American continent, still almost virgin in its attractions, in folding in its motherly embrace these conflicting nationalities will gradually form the sub-stratum of mutual amity. The "Temple of Peace," with industry as its corner stone, should be crowned with moderation, and, above all,

* Report of the Executive Committee of the Cotton Supply Association of Manchester, England, for years 1866-67. One suggestion to Southern economists: Consult the "Patent Office Report," Department of Agriculture for 1855, and find what are the productions of the various countries where cotton is grown. One question to the American people: Is Congress blind, or ruled by class legislation, that it seeks to cripple yet more our great Southern staple?

† Emile de Lavileye.

should tower *justice*. Until the fabric be thus crowned, America can never be a nation. Let vapid rhetoricians exhaust their logic of rounded periods as they may, "political molecules" cannot be made to coalesce by the dictates of a dynasty, nor the fiat of revolutionary tribunals. *Both New York and Berlin—the one the commercial capital of democracy, the other the aristocratic center of the "divine right of kings"—were originally colonized from Holland. They form the germ of the modern age. Reconcile their differences, and you may unite confused American molecules. Unrestricted commerce, with equal taxation, is the only safety-valve.

At the beginning of the thirteenth century, Prussia was a savage country, inhabited by Pagans of Sclavie origin. The Chevaliers of the Teutonic order, type of the middle age, ecclesiastic and warrior combined, conquered the country. German colonies followed and Germanized the country; time has merged them into one nationality. Too much affluence caused corruption, party spirit, which "we first endure, then pity, then embrace;" effectually prepared them to be subsequently morcelled by Poland. Like her victim, Poland, wrecked by her own puissance, was three centuries later morcelled in turn to the advantage of her whilom victim. Strange vicissitudes! stranger historic parallels! *The province of Posen contained, in 1815, only 160,000 Germans to 615,000 Poles; in 1861 there were 666,000 Germans versus 801,521 Poles; but in 1864 there were only 75 Germans for 100 Poles. Poles flee the Russian yoke and take refuge in Prussia; the Germans emigrate from Posen to America. The German bears with him his Teutonic instincts; wherever he goes he Germanizes. The tide of Germanic immigration grows stronger and stronger; whole States are German in ideas and in practice, rather than American. In addition, the Celtic element; Ireland, since 1848, has been reduced from 8,000,000 to a little more than 5,500,000!† This Celtic exodus throngs to the New World. The excess of the world relieves itself, but their loss is their gain. Reciprocal commerce engenders reciprocal prosperity. But America is thus ever in transition when this immigration extends itself. Universal suffrage gives the German immigrant of to-day the power of engraving German theories to-morrow; the Irishman, still burning with indignation against "British tyranny," seeks America in order to gratify his manhood rights, and then inculcates, through the same instrumentality, the agrarian ideas of the Irish tenantry. Native demagogues prostitute talent to gratify self-worship and individual ambition, and adopt either line, as expediency dictates. The "Constitution," gnawed to its torn

**Revue des Deux Mondes.*

†Quoted from memory, therefore only an approximation.

vitals, is declared dead. But all this is the transitory effect. The very variety of the opposing interests is their safeguard, and when time shall have softened local animosities, and prejudice given way to reason, the original landmarks of moderation restored, then America, resuming the stability which local sovereignty gives, will feel a debt to the General Government.

The tide of immigration has not yet turned sensibly towards the Southern States. Here and there a foreigner has filtered in, but not enough to affect the individuality of the Southern people. But for the South no subject so enters now into its political economy. More fortunate than other sections in the character of its original settlers, society and social usages in time of peace are more stable.

It is to be hoped that in the inevitable, and to be desired, industrial reformation, society will not suffer. Yet this will be the necessary result of an unfortunate increase of population. Immigration is the great need for the South.

But many Southern planters, and men of influence, seeing the prosperity of countries from this source, advocate the introduction of coolies, to supply the labor deficit. Nothing, it seems to us, would in the end prove more fatal to its interest. The negro race is unquestionably at present an inferior race. Leaving aside the abstract discussion of what he might become, and of his native endowments, it is not natural that an untutored, semi-civilized race can be equal to, or compete successfully with, his more blessed rival, the laborer of the white race. Time, circumstances, education, in themselves have placed him immeasurably superior to the negro, animated by nobler instincts than he is thought to possess, and far more capable of progress, but at present, we may say, in a chrysalis state. Though, on comparison with other countries, when he has emigrated, or been borne and afterwards enfranchised, we find that in no instance, in no country, has he increased so rapidly in numbers, nor progressed so far, during the same period, as under the direction and tutelage of his Southern masters. Yet we feel convinced that the African cannot be completely Americanized. Worse than all, deteriorating to the white, destructive to the black, would be the extensive introduction of coolies. We may assist ourselves at present, but, in the end, to add one inferior race to another would injure both and assist neither.

If in the Anglo-Franco Island of Mauritius agriculture has prospered from the Indian labor supply, the negro has degenerated, and like the *Fellah* of Africa, leaves the heavy productive labor to the new comers. In consequence negro population decreases, and he is fast becoming a nuisance rather than a benefit to society. Nor is it to be carelessly accepted that

the South will gain by a negro exodus. In spite of the Jesuitical influence of that covenant of hate—the loyal leagues—the negro has become a valuable element to the South. He has progressed so far that we are led to hope he may progress farther. His only hopes are with his only natural sympathizers—the Southern people. They alone understand and appreciate the reciprocal benefits. Left to his native instincts, he will degenerate into the brutality of fetichism, etc.; unaided by his former masters he will suffer; but protected and encouraged to idleness and corruption, he will become a formidable barrier to Southern progress.

Now that the word "slave" can no longer be inscribed with Puritanical utterances of "I thank Thee Lord I am not as other men." Upon the "whited sepulchres" of the Pharisee, we may hope that the immigrant will seek his home among us. A quiet welcome, unaccompanied by exaggerated professions, will greet him. There are "vacant chairs" all over the South, the sight of which will dissipate his educated prejudice against the feudal selfishness of Southerners. The German, eager to sweep away the vestiges of feudalism in the organic laws of his own Germany, will find that in the South alone of all America the wheat that was sifted from the chaff, has been preserved in its original purity. Southern feudalism consists in those great maxims, which, springing from feudal times, enduring through centuries, have been preserved by us! "No tax can be justly exacted except through the consent of the contributors; no law is valuable unless it is accepted by those who owe it obedience; no sentence is legitimate if it is not rendered by the peers of the accused." "Viola les droits de la societe foedale que les etats generaux de 1889 retroverrent sous les débris de la monarchie absolue; le droit de resistance armee, que St. Louis lui même recorenut condui soit, il est uraæ, a l'anarchie il fai soit la societe faible mais il fai soit l'individu bien fest."—Duruy "Histoire du Moyen Age."

* Southerners are proud of this, their feudalism, which they oppose to the enlightened legislation of Radicals, that in five years' time has reduced our negro population from 4,500,000 to about 2,500,000, and made ignorance his claim to act as a legislator!

ART. II.—A MILITARY MISSIONARY IN VIRGINIA.

WE extract below from the *Northern Monthly*, sections of the report of a Federal officer, detailed for registration duty in Virginia. This officer seems to have been a more impartial man than usual, and though he manifests a dislike to the Southern people, and although in some instances he manifests

a tendency to employ arguments to influence others, which he does not respect himself, yet his narrative of the state of opinion among the people of the South so nearly accords with our own, that we have cited his testimony on that point. There can be no doubt of the entire sincerity with which he, as a white man, denounces the negro vote as an outrage on civilization. True to his sectional prejudices, however, he thinks "the South deserved to have negro suffrage forced upon it, for rejecting laws which seemed to us so reasonable." The ethics of forcing upon a people an admitted evil as a punishment for a difference of opinion, is obvious to every just mind. The officer seems, however, in his last paragraph to doubt the wisdom of the policy, and deprecates it not for its injury to the South, but because it may result in injury to the North. This is like the lady whose lap-dog having bitten a visitor, exclaimed "poor little fellow, I hope it will not make him (the dog) sick!" The sympathies of this officer seem to incline in favor of the aggressor. But to the extracts :

"ON the 19th of April, 1867, while the officers of the First Military District were engaged in initiating their soldiers into the mysteries of Casey's Tactics, or were sitting on court-martial for the trial of military miscreants, an order was published detailing nearly a hundred of them for registration duty.

For an edict had gone forth that Virginia, the grandmother of States, statesmen, and States rights, should be reconstructed.

She had fought for her rights in the territories, and had obtained them, but not exactly as she wished; for, by the fortunes of war, she had become again a territory.

Within twenty-four hours after the receipt of their orders, all the officers who were detailed on registration duty started for the scenes of their labors. Many, however, could not resist the temptation of stopping one day in Richmond to see Jefferson Davis arraigned for treason. There were at least fifty officers within the bar of the court when the great fallen archangel of the rebellion was brought before Judge Underwood. We of the army were, of course, much elated at the fulsome flattery his honor bestowed upon us. Yet some were ungrateful enough to say some rather uncomplimentary things, when he announced his intention of releasing Mr. Davis on bail. One was uncharitable enough to express the wish that his honor were *suspended under-wood*. Another wished as much for J. D. But the most singular phase of the whole proceeding was Horace Greeley's sudden benevolence toward one he had so bitterly denounced. One officer said it was because he was a vegetarian, and had not blood enough to feel

indignation for wrongs committed. An old soldier suggested that he did not favor strong measures, because cold water men were always as weak and uncertain as their beverage. A bystander compared this extraordinary combination to the lamb and lion's lying down together, and remarked that the philosopher must feel rather sheepish under the circumstances.

The officers of the army are, as a class, very far from being vindictive; but they are remarkably unanimous in the opinion that at least one man should be tried for treason, and that man is Jefferson Davis.

The day after this judicial melodrama, the writer started on the Virginia Central Railroad for his county in the mountains.

My first business was to select one register at large and one local register for each magisterial district. Five just men who could take the iron-clad oath and save the country from political death, "*Hic labor, hoc opus est.*"

Nearly all were willing to serve the State at five dollars a day, or even for one dollar, so scarce was money in this community. The Government might just as well have saved the difference; for, inasmuch as the officers had to do nearly all the work and to take all the responsibility, it mattered little who or what the local registers were. But the law required them, if possible, to be "native and to the manor born," so I started on my quest. Riding the worst of horses over the worst of roads, I scaled mountains an adventurous billy-goat might have been proud to climb; I forced my way through dense forests, following often obscure bridle-paths; forded raging mountain torrents, swollen by the spring rains and melting snows; rode, in fine, a hundred and fifty miles, to find the rare birds known as Southern loyalists. The classical *rara avis* is said to have been most like a black swan;* and so, indeed, are the Virginia Union men. I thus secured the valuable services of four men for my board. Two of them could hardly sign their own names. A fifth I could not find, and had to import him.

I will give an account of one ride, simply as a specimen. Truth is stranger than fiction, and some parts of this veracious narrative may seem exaggerated. But I will, at least, "nothing extenuate, nor set down aught in malice."

Before leaving Richmond, I had obtained from members of the State Legislature the names of all the leading citizens of the county of loyal antecedents. Among others given me was the name of John Burns, of the Red Holes. As honest old John cannot read, and the Burns tribe of Bath are by no means literary, I do not hesitate to give his name. This old patriarch was down in my memorandum book as one the most

* "Rara avis in terris, nigroque simillima cygno."

influential men in his part of the county, and as loyal to the Government. Him, therefore, I sought, riding through a wilderness of woods. After jogging along for hours without seeing anything resembling a man, I at last saw a wild-looking specimen in the road.

EGO. Hello, stranger!

MOUNTAINEER. Hello, yourself!

EGO. Can you tell me where Mr. John Burns lives?

MOUNTAINEER. Do you mean young John, old John, or old grandfather John?

EGO. Why, how many Burnses are there about here?

MOUNTAINEER. About five hundred, big and little.

EGO. Did none of you ever move away?

MOUNTAINEER. Yes, Pete Burns moved out to Indiana, but he took the agers and come back.

EGO. I want to find the head devil of all your tribe. Where does he live?

MOUNTAINEER. Old grandfather John lives in the first big house up yonder lane.

In riding by the stable yard, I saw a rough, ragged, shaggy patriot sitting on a horse-trough, and I knew at once I had found my man. Hitching my equine dromedary to the fence, I went and sat down by the old man and began conversation. I told him I had heard of him way down in Richmond, and that I was glad to hear he was a good Union man. Whereupon the heathen told me it was a d—d mistake, as he was on the other side. This was rather discouraging, as, after riding twenty miles, my horse needed a feed and I wanted a dinner. I knew, moreover, that as old John went, so all his neighbors would go. Nothing remained for me, therefore, but to convince him that he did not know his own mind. Every poor man thinks the world has done him wrong, and that the great ones of earth are his natural enemies; and it is easy for any plausible talker to turn a latent discontent into a positive dislike. The philosophy of the Jacobin Club finds an echo in the mountains of Virginia. I told this ignorant old man that Davis, and Mason, and Hunter were his enemies; that the aristocrats of the South had kept him and men like him in poverty, and had ruined them by the war. They had ruled the State a long time; but what had they done for the poor man? Had they given free schools? No! Had a poor man a chance to rise? No! But Andrew Johnson, a poor man of the South, had been made President by Northern votes. In conclusion, I told him he needed two things—a new deal of the cards, and to cast the old leaders overboard, as Jonah was, to save the ship. He listened attentively, and seemed pleased, and after fifteen minutes' such talk promised to help me. He was, moreover,

as good as his word ; for through his influence this entire clan came out strong for reconstruction. Yet this same patriarch told me that the last President he had voted for was Harrison, and the last one he knew much about was Taylor. He had never been further from home than the county seat, and, although living within twenty-five miles of the railroad, he had never heard the whistle of the locomotive.

The ignorance of these people and their indifference to passing events can not be wondered at, when we consider that the inhabitants of each little valley are isolated from the rest of the world six months out of twelve ; that free schools are unknown among them, and that not one man in fifty reads a newspaper. On the other hand, I must say that they have many excellent qualities. They are remarkably honest and law-abiding, kind-hearted and hospitable. This very region supplied the Confederacy with the best possible soldiers. The mountains abound with bears, wolves, panthers and all sorts of game. Every man is a hunter, and inured to hardship and exposure. They are most excellent marksmen and splendid horsemen. A wise policy would make these people as loyal to our Government as the Tyrolese are to the house of Hapsburg, or the Swiss to their native land.

About the first of May, the Presidents of the Boards of Registration sent in the names of their assistants to General Schofield, and reported themselves ready to begin operations. But feeling confident that political complications would interrupt the work, I took a trip to Richmond. While there, I witnessed an occurrence of events worth recording, from their singularity, and important from the consequences which resulted from them.

NEGRO RIOTS AND THE FORMATION OF PARTIES.

"Tros Tyriusve mihi nullo discriminne agetur."—VIRGIL.

"What are your politics ?
I've not a —— politie."—PHOENIX.

One fine May morning, as some fire companies were trying their engines in Richmond, a disturbance arose which resulted in the arrest of a negro. A large crowd of freedmen attempted to release their man and brother, which, being stoutly resisted by the police, resulted in a very serious riot. Some of the blacks commenced running up and down the streets, crying, "Rally ! rally ! rally !" Soon reinforcements came to them from every quarter. In ten minutes Broad street was black with a howling, raving mass of black humanity, all shouting *Rally !* although not one in ten knew what they were rallying for. Some looked as fierce as Timbuctoo cannibals ; others were grinning, and seemed to regard the whole affair as a

frolic. But every minute matters looked more serious. The police were getting the worst of the fight. General Schofield and the Mayor of the city rode among the negroes and tried to counsel them to keep the peace. They were no more heeded than the winds. In five minutes more, the work of blood and burning might have been inaugurated. At this interesting crisis a company of regulars were ordered to clear the streets. On they came at a charge.

We of the noble Anglo-Saxon race flatter ourselves that we are the only people who can stand cold steel. Our Gallic, Teutonic and Sclavonic friends lay claim to the same distinction. But our colored brothers, although famous stealers, evidently do not like this kind of steeling. The bayonet is *too* pointed an argument. In this case it was very convincing.

The blacks fled faster than they came, running and rolling over each other in furious flight. Such an exhibition of eyes and ivory as they made while seeking their dens can never be forgotten by those who saw it. Yet the sublimest part of the whole farce was their exclaiming, as they ran away, that "the soldiers had gone back on them." These deceived and demented creatures really thought that, if they got into a conflict with their former masters, the military would side with them. Then, they expected, in the words of the illustrious Underwood, "to hold high carnival in the streets of Richmond." Great, therefore, was their disappointment when General Schofield sustained the civil authorities. The *emeute* seemed very comical to the looker-on, yet it came near proving a tragedy. The negroes, like the French, are generally a happy, pleasure-loving race, but they are also like the French in this, that, when their wilder passions are aroused, they are fiends incarnate. And what a change was here, my countrymen! Two years before, these same negroes trembled at the anger of their masters or their masters' children. They feared a constable or a policeman as they do the evil eye. In one word, they were slaves. In two years they had learned to despise their former owners, defy the civil authority and fight the police. How rapidly they had become civilized and Christianized! The causes which led to these results deserve serious consideration. * * * * *

To organize a party in the States lately in rebellion, the agents of the Freedmen's Bureau were used as political propagandists. An army of Yankee school-marms were sent down as coadjutors. The aid of such native fanatics and demagogues as offered their services were eagerly accepted. The end was thought to justify the means. But the South, like Ephraim wedded to his idols, rejected the constitutional amendments. Something more was necessary. Registration

was given. After that entering-wedge was obtained, the work of party organization went on faster than ever.

In the mean time, a daring demagogue had formed a party. Hunnicutt, the editor of the *New Nation*, had taught the freedmen their first lesson in agrarianism. Under his direction, all sorts of secret societies, leagues and military companies had been formed among the negroes. Within a few months after the close of the war, they had been taught to expect that the lands of the Southern planters would be confiscated and divided among them. They believed that this was to take place on Christmas, 1865. Happy in this delusion, they stopped work, that they might enjoy at leisure their Great Expectations. To disabuse the minds of these credulous creatures, General Terry, then commanding the department had to issue a proclamation, telling them positively that no lands were to be given them.

In lieu of land, political greatness was thrust upon them. Hunnicutt was master of the situation. He at once stepped forth as their Moses, holding Mr. Stevens's confiscation bill in one hand and his own *New Nation* in the other.

Senator Wilson vainly attempted to effect a compromise between Botts and Pierpont's small and respectable party, and Hunnicutt's unbleached myrmidons. The blacks knew their power; the days of compromise were past.

REGISTRATION.

"Now, by St. Paul, the work goes bravely on."—COOLEY CIBBER.

"Hinc illa lachrymæ."—VIRGIL.

In the third week in June, all the registrars in Virginia began their labors. A Yankee officer in uniform appeared at every county seat in the Old Dominion. Each had one or more registrars at large, in proportion to the population of his county, and one local registrar for each magisterial district in it. Three registering officers constituted a board—a United States officer, a registrar at large and a local registrar; or, a registrar at large and two locals. In populous counties, two or more boards could be run at once, the United States officer always having supervision of the whole.

On the 18th of June, I went to the court house of Bath county, to begin my work. Many rough mountaineers were already assembled. They were clad in rough home-spun. A broad-brimmed felt hat, or a bear-skin cap, and jack-boots and spurs, completed their costume. A little more than two years before, any one of these men would have shot me at sight; but that day most of them came forward and gave me a hearty shake of the hand. Beyond this crowd I could see

a fringe of ebony faces. At ten o'clock the board was called to order.

The first man who registered was a naturalized Englishman. Federal or Confederate were alike to him. The next was a Presbyterian preacher, who looked as if he thought what must be must, so he came up promptly to have done with it. Then for nearly an hour none came forward. My registrar at large looked resigned and placid. All he cared for was \$125 a month. John, the local, seemed to devote all his mental and physical energies to sharpening pencils.

At last a few old men came forward, and, following their example, the candidates for reconstruction came thick and fast. The old men looked very serious, and while holding the Bible to take the oath, their hands would shake as though they had been stricken with palsy. Some were so nervous that, when they attempted to sign their names, they could not hold the pen in their fingers. The young men came up laughing and giggling, after the manner of gawky country lads.

At length the first negro came forward. As soon as he had registered, an old gray-haired man raised his hands and exclaimed, in a voice choking with emotion: "Great God! that I should live to see this day!" It was the anniversary of the battle of Waterloo, and I thought, as I looked at the old man's sad face, that Napoleon could not have felt a much deeper despair, when he saw Ney's great column halt, waver and give way. For who does not know that the first day's registration was a political Waterloo to the South? *Hinc illæ lachrymæ.*

The negroes in the mountains are greatly in the minority, and are better behaved and more intelligent than those of the lower counties. Yet negro equality is a bitter pill to these proud people. I can vouch for the fact that, long after the war, the country gentlemen retained a kindly feeling for the blacks, and treated them with kindness. Many farmers supported an idle, worthless set of darkeys on their farms, either from force of habit or good nature. But the instant the first negro registered, a change came over the white population. Their kind feelings departed as quickly and as surely as Othello's love changed to hate under Iago's conjuring.

The issue was serious, yet the process of enfranchising the negroes was very ridiculous. They came forward in droves. Some looked wise as owls. Others were grinning from ear to ear. Imagine a coal-black field-hand, standing up in presence of his former master, and swearing that he had never been a Judge, a member of Congress, or of the State Legislature, etc., and afterward taken part in the war on the rebel side. The oath was in legal jargon, and I am sure not one in twenty

understood it. Among other things, they had to swear that they had never been convicted of a felony, and, finally, to bear true faith and allegiance to the Government. I asked some of the darkeys what a felony was. It was amusing to see their looks of stupid wonder. I asked another what allegiance was. He said he didn't know, but he'd do it; he always did what was right. One of the challengers asked him about a certain pig he had once feloniously appropriated. "Golly, boss," Sambo replied, "dat was afo de war. Dat don't count." Another set of the darkeys did not know their own ages. Jestingly I told one of the assistants to look at their teeth. Thereupon they made a most wonderful display of ivory with the most imperturbable gravity imaginable. This feeling against the negro growing stronger every day, I felt it my duty to try to pour oil on the troubled waters. I would approach some furious fire-eater who was declaiming against the iniquity, and ask him if he had ever been to a horse-race. "Of course he had run horses, or his father had." Then I would ask him if he thought it fair to handy-cap or weigh down the weaker horse. Upon his replying in the negative, I would ask him if he did not consider the negroes an inferior race, and inquire if it was not unfair and cowardly not to give them an even chance with the whites. No one knew better than myself the fallaciousness of this kind of argument. But it was an answer to people who only make appeals to prejudice and passion.

There was an argument in favor of reconstruction which always made a great impression on the common people. It was this, (and this is important, as showing the direction their thoughts are taking): That Virginia is blessed with a good climate, rich soil, inexhaustible beds of coal, and veins of metallic ore, great rivers, and last and not least, fine harbors, open the year round; that she had once been the first State in the Union; yet even before the war she had been distanced by States of not half her natural advantages. Why was it? Her people are industrious, and *they* thought slavery had been no disadvantage. Was it not the fault, then, of the men they had been sending to Richmond? Four times out of five the reply would be: "Yes, d—n them. They ruined us. They brought on the war; we were opposed to it." In all my travels through Virginia I have not met more than half a dozen original secessionists. The race is nearly extinct.

* * * * *

The citizens of my fourth district were somewhat more civilized, but hardly so friendly or well disposed. This was attributable to the fact that it was on the line of a railroad, and had been somewhat contaminated by the tide of travel that passes through it. But the negroes were also *en rapport*

with their black brothers in Richmond. Here, a colored preacher said to me, after he had registered: "Colonel, I want to run for office." I inquired what office he proposed to offer himself for. He replied that was what he wanted to talk to me about, but he thought he'd rather run for Congress. My mild-mannered registrar at large looked resignedly confounded. The local registrar of the district "grinned horribly a ghastly smile." This happened at Old Milboro Springs, on the 4th of July, 1867. Shades of '76, can you smile or weep?

When I went on registration duty, I had no very friendly feelings for the Southern people. We of the army had, as a class, been slighted and insulted by the women, the press and the preachers of the South. This was, however, as dust in the balance, compared to public considerations. All the Southern States had rejected the constitutional amendments. Many of us felt that the South deserved to have negro suffrage forced upon it, for rejecting terms which seemed to us so reasonable. What conclusions my brother officers may have arrived at, I know not. But for myself, I must say that the negroes proved so ignorant, degraded and unmanageable, that I have been forced to the conclusion that manhood suffrage may prove a dangerous if not a disastrous experiment. Its effects cannot be confined to this section. Northern Utopians may find that it will return to plague the inventor:

"And like that strange missile the Australian throws,
Their *sable* boomerang may slap them on the nose."

ART. III.—FORTIFICATION.

It is an interesting fact that whatsoever America undertakes astonishes Europe by the rapid originality with which it is effected. The reason is very obvious. The systems of Europe, civil, religious and military, are so fixed that nothing short of a revolution can improve them. It is a curious fact that Italy owes her freedom to Austrian conquest. The Austrian obliterated the traditions and usages which held Italy cramped for centuries. It liberated the common sense of the country, allowed the introduction of new ideas, and enabled Cavour, and Garibaldi, and Emanuel to do what Pius had vainly endeavored to effect. The result of this social reform was seen in the large and well disciplined army with which Italy came to the aid of France and Prussia, to the fleet of iron clads which bore her flag, and to the railroads which

transported her troops and supplies. In like manner men in the United States undertake whatever they deem judicious without the restriction or interposition of prejudice, usage or authority which prevents it. We have found an illustration of American progress in field fortifications. Before the American war Vauban and Todleben furnished the chief authorities of ancient and modern field defences. That any improvement in this science should have arisen in America would have been considered absurd. Yet we find from an elaborate English treatise on fortification, not only that the Americans have made great improvement in the rapidity and effect with which they have thrown up field works, but that the Confederate generals have obtained commendation for superior skill in the same profession. Our readers know the defect of intrenching tools in the Confederate army. They know that not until the latter campaigns did men or officers rely on field defences. We are as much surprised then as gratified to see the following tribute to the skill of our commanders:

ERROR OF ATTACKING FORTIFICATIONS.

Another error that with many stands for truth, and claims notice here, is the belief that the allies erred by not taking—or attempting to take—Sebastopol by a *coup de main*—with a rush. The shade of Vauban protests against the thought; every record of the history of war teaches a contrary lesson. It is not possible to imagine a graver error than for them, reasoning from what they knew, to have rushed upon those formidable works. The dread evils of such generalship has been illustrated in so many bloody records, by fearful, useless expenditure of human life, that by the prudent general they can never cease to be remembered. The late American war has added a deeper impress—especially at the battles of Fredericksburg and Gettysburg—to the illustration of this error—than it ever had before. To this we shall at greater length refer again, giving ample reason for all we have asserted.

The section of our subject to which we would now direct attention, is that which divides field works—the class of works which were so extensively, and with such important results, adopted in the late war in North America. The first consideration with the military engineer, when preparing to hold a position, is cover, if time permits, he adds obstruction, in the way of the assailant. The first is obtained by a parapet of the readiest found materials, sometimes stones, often in the American war it was built up of logs, but as a rule, the mass is formed of earth; the second by a ditch in front of the parapet.

DEFENCE BY ABATTIS—GRANT'S LINES.

Underwood of some strength may be worked into what is termed in an *entanglement* in much the same fashion, and if of considerable breadth, a very serious entanglement it would be. Where heavy timber is found in similar positions, as in nearly all the way of General Grant's advance on Petersburg, the trees may be used in this way, fashioned into still more formidable obstacles; and here they were so utilised to an extent unheard of in former wars. The cutting of the trees half through, turning down their tops, and interlacing them, was what is termed "slashing" in Colonel Smith's account (which we have already given) of the rapidity with which he saw defences constructed by the Federal troops. Sir Joshua Jebb says of such barriers, to be formed of large and smaller trees, or underwood: "Stumps should be left of different heights, varying their size; those that are large enough to conceal a man should be cut as near as may be to the ground, but it will be useful to leave smaller ones four or five feet high. If these latter, instead of being entirely separated, are only half cut through, and the tops turned down and interlaced among the stumps, in the way in which a growing hedge is 'pleached,' it would puzzle the devil himself to get through such an entanglement under a close fire, provided there were trees enough on the ground to make it perfect."

MAGRUDER AND McCLELLAN.

A stream that an enemy must cross in the assault, may be very effectively utilised in the defence. The strongest part of the defences of Torres Vedras and Santurem were the Zizandre and Rio Major. This, with a sedgy marsh, such as we have shown, covered a great part of Massena's front. The Zizandre, when swollen after rains, that fell very opportunely, rendering it unfordable—an impassable marsh—was far the strongest part of the defences of Wellington, from Torres Vedras to the sea.

The lines at Yorktown, so fatal to McClellan, derived much of their strength from creeks and inundations. These lines, being one of the most striking proofs on record of the importance in defensive warfare of ordinary field works, claim notice here. No account has been given by any of the Federals or others that they exhibited anything new or specially ingenious. And as General Magruder, who constructed and defended them, was only an ordinary West Point man, we are not warranted in inferring that he departed either in trace or profile from the ordinary types. Their effect, however, is among the certainties from which the thoughtful military student will derive a useful lesson. McClellan, as will be

remembered, landed his Army of the Potomac (designed for the taking of Richmond) at Fortress Monroe, in 1862. Thence marching up the peninsula formed by the York and James Rivers, without the slightest suspicion that such a barrier lay before him, he was brought to a sudden halt by the lines of Yorktown, where the brave Cornwallis surrendered to young America.

These lines were traced at the narrowest part of the peninsula, and mounted with heavy guns. They were strengthened in front, as we have stated, by creeks and inundations. The flank on the York river was covered by a battery, the fire of which was crossed by the fire of Fort Gloucester. Hence an attempt by the Federal gunboats in this river to enfilade the works was not to be thought of. The celebrated Merrimac being just then in the James River, keeping Federal gunboats at a respectable distance, rendered the opposite flank safe from enfilade fire.

The number of McClellan's forces was 130,000; the number of Magruder's was 12,000. And these, covered by their works, kept McClellan's forces a month upon such exposed and marshy ground as subjected them, morally and physically, to one of the severest tests that could be well applied to an army composed of such materials.

When General Magruder abandoned these works, he did so—not by force, but to co-operate with troops further up the peninsula—a day before McClellan was aware of the movement.

We shall here relate another incident of the American war, where water proved a valuable agent to the Confederates. Near Colquest's Salient—a strong work in the lines in which they made their last, long, vigorous defence—a ravine crossed the general line of works at right angles, across which a dam was constructed, with sluice-gates at each end. On a rising ground near the stream was the great rendezvous of the Federal piquet. One night, when there was a heavy fall of rain, the sluice-gates were shut, the waters accumulated to an unfordable depth in a hollow between the Federal piquet and their own works. By daybreak they were attacked by the Confederates, who quickly broke their line, and made the greater number prisoners. The Federals did not re-occupy this unlucky ground. Hence the Confederates, from this time, found the defence of the opposite section of their works a simple duty.

ART. IV.—PROPOSED LINE FOR A SHIP CANAL.

On the Surveys of Proposed Lines for a Ship Canal between the Atlantic and Pacific Oceans. By DR. CULLEN.

THE necessity that has long existed for a short and direct passage from Europe and the United States to the Western shores of America, Australasia and China, and *vice versa*, by means of a continuous channel, which would obviate the necessity for transhipment, has given rise to several projects for the junction of the Atlantic and Pacific Oceans. These have been discussed in papers read before the Institution of Civil Engineers, by Mr. Glynn, in 1847, and before the Royal Geographical Society, by Captain (afterwards Admiral) Fitzroy, in 1850; but, since those gentlemen wrote, several surveys have been made, and much additional information acquired. Early in 1867, a report on "Proposed Interoceanic Railroads and Canals" was presented to the Secretary of the Navy of the United States by Rear-Admiral C. H. Davis, the Superintendent of the Naval Observatory, Washington, in accordance with a resolution passed by the Senate on the 19th of March, 1866; but Admiral Davis has not entered into any detailed description of the lines, referring for information to the thirteen surveys and maps appended to his report. The following paper is, therefore, respectfully submitted with the view of giving a summary of all that is known on the question of Interoceanic Communication. All the proposed lines have been surveyed, except that of Darien, which will form the subject of another paper. They are, from N.W. to S.E., the Tehuantepec, Honduras, Nicaragua, Chiriqui, Panama, Chepo, and Atrato.

THE TEHUANTEPEC LINE.

This, which is the most northern and western, attracted the attention of Cortes soon after the Conquest, from the narrowness of the isthmus and the remarkable depression of the Mexican table-land at that point. In 1771, the idea of opening a canal between the oceans by this route, which had long been entertained, received a sudden impulse from the unexpected discovery in the fort of San Juan de Ulloa, in Vera Cruz harbor, that some cannon cast at Manilla had crossed the isthmus by the rivers Chimalapa and Coatzacoalcos.

The width of the isthmus from the mouth of the river Coatzacoalcos to Tehuantepec, on the Pacific, is about 138 miles in a straight line, and the direction is nearly due south. The Coatzacoalcos falls into the Gulf of Mexico in lat. $18^{\circ} 8' N.$, long., $94^{\circ} 17' W.$, by two mouths. The principal entrance has a depth of 20 ft. on the bar, and within the bar the depth is 6 to 7 fathoms, and the river is about 800 yards wide. Its

course up to the confluence of the Malatengo is about 160 miles, with a fall of 132 ft., the depth varying from 30 ft. in the lower to 6 ft. in the upper part of the river. Leaving the Coatzacoalecos and ascending the Malatengo and the Chichihua, the summit level is reached. This is not a peak or a ridge, but an elevated plain, called the Mesa, or table-land, of Tarifa, extending 35 miles in the direction of the proposed route. The elevation of this water-shed, or lowest summit level, is 685 ft. From thence to the Pacific the distance is 35 miles, 15 of which are occupied by three lagoons, having a depth of from 12 to 18 ft. The entire distance would be 210 miles, and the enormous number of 150 locks would be required. But Mr. William, who, with Major Barnard, of the United States' Topographical Engineers, surveyed the line, gives it as his opinion that water does not exist at the requisite level in sufficient quantity to render a canal practicable by lockage, and the enormous length of rock which would require to be cut through precludes the possibility of adopting that alternative. To the above unfavorable features it must be added that the adjacent coasts are frequently troubled with furious storms, called Nortes, Tapayaguas, or Papagayos, according as their direction is N., S.W., or N.E., and that there is no harbor of any kind on either coast. This line, moreover, is out of the way to any place except California.

THE HONDURAS LINE.

This was explored in 1853 by Mr. Squier, for the directors of the British Honduras Railway Company. It was (and is again) proposed to begin at Puerto Caballos (Port Cortes) in the Bay of Honduras, and to proceed directly south, through the State of Honduras, to Fonseca Bay, on the Pacific. Although this route has good harbors, and the head-waters of the Rio Goascoran and the Rio Humuya, one of the chief affluents of the Ulua, interlock and even pass by each other, in either direction, for several miles of their course, the construction of a canal is utterly impracticable, since the summit level to be attained is 2956 ft. above the level of the sea, and there would not be sufficient water to supply a canal. The length of the proposed railroad line is 231 miles, for 17 of which the grade is 95 ft. per mile.

THE NICARAGUA LINE.

By this line it was proposed to effect a communication between the Atlantic and Pacific by deepening the river San Juan from its mouth to the Lake of Nicaragua, out of which it flows; and cutting a canal from the further side of the lake to the Pacific.

The length of the San Juan, the mouth of which is in lat.

$10^{\circ} 56'$ N., long. $83^{\circ} 43'$ W., is 119.08 miles. There are no cataracts or falls in it, all the obstructions being from rapids, the principal of which are those of Machuca, which extend for about a mile, with broken water running over a rocky bottom, and the Castillo and Toro rapids near the lake. It is at all times navigable along its entire course for large piraguas drawing from 3 to 4 ft. of water. The fall from the lake to the Atlantic is little over 1 ft. per mile.

The lake is 95 miles long, and 30 miles wide, with an average depth of 15 fathoms. The elevation of its surface is 125 ft. above the *mean* level of the oceans. Baily found the surface of the lake to be 121 ft. 9 in. above low water on the Atlantic, and 128 ft. 3 in. above low water on the Pacific. Childs gives the elevation at 128.47 ft. above low water on the Pacific.

On the Pacific side of the lake there is a mountain ridge rising to a considerable height above it. From its crest there is a sudden descent to the Pacific, the nearest part of which is only 15 geographical miles from the lake.

In 1781 Don Manuel Galisteo, by order of the Spanish Government, took the levels from the Gulf of Papagayos (parrots), on the Pacific, to the lake. He used a water-level, and by a series of 347 stations, about 100 yards apart, found the height of the ridge intervening between the lake and the sea, upon the line he took, to be 133.3 ft. above the surface of the lake. The distance was about 15 geographical miles.

In 1837 and 1838 a survey was made by Lieut. John Baily, of the Royal Marines, at the request of General Morazan, then President of the Central American Republic. Mr. Baily proposed to cut a canal $15\frac{2}{3}$ miles in length from the lake to the port of San Juan del Sur. This little harbor is narrow at the entrance, but widens within. It is surrounded by high land, except from W.S.W. to W. by S. The depth of water at the entrance is 3 fathoms, and its width 1,100 yards. Ships can go up for a mile and a half, but as the winds often blow with great violence from the N. and N.E., there is sometimes great difficulty in making the port. Baily found the summit-level of the ridge intervening between the lake and the Pacific to be 615 ft., or 487 ft. above the lake. For a canal 30 ft. and 50 ft. wide, cutting through this ridge would render necessary the excavation of the enormous quantity of 4,927,577,800 cubic feet. Mr. Horatio Allen, the engineer of the Croton aqueduct, in whose hands Mr. L. Stephens placed Baily's survey, thought it would be preferable to rise by locks 72 ft. from the lake, then to tunnel two miles through the ridge, and descend by locks to the Pacific.

But, as the ridge is volcanic, there being four extinct volcanoes in it, one of them, Omotepec, still smouldering on an

island in the lake, it was very reasonably apprehended that a sufficient supply of water could not be obtained for a canal at the elevation of 72 feet above the lake. On the whole, this line presents more formidable difficulties than Galisteo's.

CHILDS' SURVEY.

In 1850 and 1851, this route was surveyed by Col. Childs,* his assistants being Messrs. Fay, Curry, Fitzgerald and Cropsey. He proposed to cut a canal 28.28 miles long, with six locks, on the Atlantic side, and to canalize the San Juan by means of seven dams and eight locks. The communication between the lake and Brito, on the Pacific, was to be effected by a canal 46.32 miles in length, with fourteen locks. The summit of the ridge to be cut through on the Pacific side was found to be 18.03 above the surface of the lake, and the width of the ridge to be eight miles. Some dredging would be required at either end of the lake, as well as piers and embankments, the approach to its shores being obstructed by shoals and sandbanks. At Brito an artificial harbor would be necessary.

This line, the direction of which is westwardly, would thus require seven dams and twenty-eight locks, and would consist of

Miles.
28.28 of canal on the Atlantic side.
90.80 of river navigation.
56.50 of lake navigation.
18.32 of canal on the Pacific side.

193.90

Child's estimate for a canal 17 feet deep was £6,570,483. At the same rate, a canal 20 feet deep would cost upwards of £10,000,000. He estimated the time necessary for the transit of a vessel from sea to sea at seventy-seven hours, assuming that she would be in continual progress, day and night, and would only spend twenty-eight minutes at the passage of each lock.

LINE BY LAKE MANAGUA.

To avoid the difficulty of cutting through the rocky ridge, it was proposed to carry the canal from the lake, by the river Panaloya, or Tipitapa, to Lake Leon or Managua, and thence to descend to the port of Realejo, on the Pacific. Lake Managua is about 15 leagues in length and 35 leagues in circumference, its greatest breadth being about 9 leagues. The average depth of water is 10 fathoms, and its surface is 28

* Childs, Col. O. W., Map and Profile of the Nicaragua Ship Canal Route; New York, 1852.

feet 8 inches higher than that of the Lake of Nicaragua, with which it communicates by the river Tipitapa. It is, therefore, 157 feet 2 inches above low water on the Pacific. The length of Tipitapa is 30 miles, and for a distance of 24 miles from the Lake of Nicaragua it has a depth of from 1 to 3 fathoms; but beyond this there are rapids, and in a distance of $4\frac{1}{2}$ miles a fall of 13 feet, caused by a dike of recent lava. It could, therefore, only serve as a feeder for a canal.

By this course the difficulties of getting over the ridge would be obviated, but the length of the navigation would be increased nearly 100 miles, and it is doubtful whether Lake Managua could furnish the water necessary for the lockage, *in both directions*, which it would have to supply.

OTHER BRANCH LINES PROPOSED.

It was also proposed to connect the northwest end of the Lake of Nicaragua with the Gulf of Fonseca, or Conchalagua, the shortest line between them being more than ninety miles. Another plan was to make a cut from its south end to the Gulf of Nicoya. By each of these modifications, however, the length of the canal, the amount of excavation and lockage required, and the cost would be very considerably augmented.

Ersted.—Lastly, *Ersted*, a Danish engineer, proposed a line from the mouth of the Sapoa river, at the southwest part of the lake, to Salinas Bay, and estimated the height of the ridge at 130 feet above the surface of the lake. This line would be altogether in Costa Rica.

Gamond.—In 1858, *Ersted*'s line was surveyed by M. Thome de *Gamond*, who ascertained the elevation of the Col de Salinas to be 130 feet above the surface of the lake. His report was published by M. *Belly*.*

M. Belly.—Early in 1859, M. *Belly*, M. *Gamond*, M. *Elie de Beaumont*, Mr. *O'Gorman Mahon*, and a large staff of assistant engineers, went out to survey the line for an association of French and English capitalists, but after a careful examination, the project was pronounced to be impracticable.

Earthquakes and Volcanoes.—Besides the unfavorable features of this route, the consideration of the insecurity of the works, if ever completed, would justify great hesitation in undertaking any extensive operations in this district. Earthquakes are of very frequent occurrence. Volcanoes have risen within very recent periods, and prodigious quantities of ashes, water and lava have been from time to time thrown over the country; and the relative elevations of land and water have been materially changed, all within the memory of living men. *Humboldt* says, "There is no spot on the

* *Belly, M. Felix, Canal de Nicaragua, Paris, 1858.*

globe so full of volcanoes as this part of America, from the 11th to the 13th degree of latitude." Mr. Stephens describes several volcanoes now in a state of activity not far from the line the canal would take; and Bailey relates a curious instance of the rise of a volcano to the height of 1500 feet above the level of the sea, from a spot where living men had milked cows. Indeed, the volcanic character of this country is officially recognized, for the arms of Nicaragua and the seal of the Government are five volcanoes in action.*

Unhealthiness.—The insalubrity of the climate, owing to the swampy character of the banks of the San Juan, is another disadvantage under which the route labors. On this point it may not be irrelevant to mention that, in 1779, an expedition was sent from Jamaica by Sir J. Dalling, to take the fort of San Juan, on the river, and the cities of Granada and Leon, so as to command the lake. Lord Nelson, who was engaged in this expedition as Captain of the *Hinchinbrook*, in writing to Dr. Moseley, who was preparing a second edition of his "Treatise on Tropical Diseases," remarks that "in the *Hinchinbrook*, with a complement of 200 men, 87 took to their beds in one night; and of the 200, 145 were buried in mine and Captain Collingwood's time, and I believe that not more than 10 of that crew survived." On the return of the expedition, Nelson himself was carried ashore at Jamaica almost in a hopeless state.

Political Considerations.—Politically, there are at present no difficulties with regard to this route; but there was long a disputed boundary question, in which Nicaragua, Costa Rica and the Mosquito territory were concerned. For many years, too, the occupancy of the mouth of the San Juan was a bone of contention between the British and the United States Governments, and a bewildering mass of diplomatic rubbish was written on the subject, which was, happily, brought to a close by the Bulwer and Clayton treaty of 1850. But hardly was the ink dry when they disagreed about the meaning of the first few words of the first sentence, each interpreting them in a directly opposite sense, whereupon the distracting correspondence recommenced, and culminated in the burning of Greytown, or San Juan de Nicaragua, by Captain Collins, of the United States corvette *Cyane*, on the 13th of July, 1854. This act brought matters to a crisis, and the paltry and undignified squabble was at last settled by the Dallas-Clarendon treaty of 1857.

Harbors.—The want of adequate harborage on either coast is the grand disadvantage under which this route labors,

* A new volcano burst forth near Leon on the 14th of November, 1867, and continued to burn till the 30th, when it died away, apparently smothered by its accumulated eruptions.

Brito has no pretension whatsoever to be called a harbor, the line of the coast thereabouts not presenting even an indentation. The harbors at the other proposed termini on the Pacific are wanting in either capacity or security, or both.

The so-called harbor of San Juan de Nicaragua, or Greytown, is formed by a broken, low peninsula, which forms with the coast an inlet or basin, about three-quarters of a mile in extent, at the mouth of the San Juan. This narrow strip of land is composed of loose, black, ferruginous sand, which is so highly magnetic as to interfere with the proper action of the compass. Outside of it a shoal extends to the distance of a quarter of a mile, over which the sea breaks heavily. Off Punta Arenas, the western point of this strip, there is a shoal with only three-quarters or half a fathom on it, which often shifts and is subject to considerable changes, from the heavy floods that occasionally come down the river. Punta Arenas itself has of late years advanced so rapidly as to close the harbor, except to small vessels. In fact, this harbor is only the recipient of the waters of the San Juan, after they have passed through its delta, or percolated through the low grounds and out of the lagoons in the vicinity, bringing with them much drift bush and dead trees. These ground on the shoal off Punta Arenas and become the nuclei of future islets, which, by their gradual increase, threaten to block up the harbor, and force the river to seek an outlet somewhere else. The delta, which, is increasing, is formed in the first instance by mud brought down by the river. On this, dead trees ground and form islets, which in time become connected, the quick, rank vegetation of the moist climate assisting in the process. The three channels into the river have only a depth of three-quarters or half a fathom over the shoal which extends in front of them, from the west extreme of Greytown towards Point Mandeville. Within them are from one and a half to two fathoms in the river. The West Indian mail steamers and the New York steamers, which call at San Juan de Nicaragua, do not enter the harbor, but lay to outside; and, as the prevalent winds make the coast a lee shore, they have to keep steam up all the time. Should it blow much, they cannot communicate with shore, but are obliged to put to sea at once. Northerers are not unfrequent, and much damage was done by one on the 22d of November, 1862. Lieutenant (now Captain) Pim, R. N., who surveyed the harbor in April, 1860, says: "The deepest water I could obtain between the two points of the entrance was only twelve feet, and that not continuously across." On a subsequent visit, he found that "the sand spit which forms the seaward face of the port had extended itself, and therefore narrowed the entrance, during fifteen months, no less than 200 yards." More recent informa-

tion is to the effect that the harbor is almost completely filled up, and the river has forced a channel for itself elsewhere. It is evident that such a harbor could never be made suitable for the terminus of a ship canal. For this, and the other reasons given above, the idea of opening a ship canal communicating by this route has been fully abandoned.

For many years past, passengers and goods have been carried across by the Accessory Transit Company, formed by Vanderbilt, of New York. They are conveyed by steamers and boats, on the lake, and mules from thence to the Pacific; and, although there are six transhipments on the way, the line is so frequented by outward and homeward bound Californians that it pays very well.

A railroad from Monkey Point to Realejo has been proposed by Captain Pim, R. N. Monkey Point, 38 miles due north of Greytown, is in lat. $11^{\circ} 46' N.$, long. $82^{\circ} 45' W.$ The little bay under its lee, which is protected by two islands, has good anchorage and an average depth of $3\frac{1}{2}$ fathoms. The line runs close to the Chontales gold district. Its length would be 225 miles. The lowest summit-level, according to Mr. Collinson, civil engineer, is 619 feet above the lake, or 740 feet 9 inches above low water of the Atlantic.

(*To be Continued.*)

ART. V.—DEPARTMENT OF COMMERCE.

IMPORT OF COTTON IN 1857.

THE import of raw cotton in 1857 amounted to 11,272,651 cwt; from the United States 4,715,733 cwt; from British India, 4,449,259 cwt; from Egypt 1,127,541 cwt; from Brazil 628,761 cwt; from Turkey 57,024 cwt; from the Bahamas and Bermuda 10,623 cwt; from China 4,707 cwt; from Mexico only 22 cwt, and from other countries 278,981 cwt. The quantity of cotton exported from the United Kingdom in 1857 amounted to 3,130,593 cwt, leaving 8,142,058 cwt the excess of imports over exports—a quantity which has been four times exceeded—viz., in 1859, 1860, 1861 and 1866. It is the first year since 1861 in which the import of cotton from the United States has exceeded in quantity the import from British India.—*Morgan's Trade Report.*

THE INDIAN TRADE.

The value of the exports of British goods and products to our Indian possessions showed some progress last year, having amounted to £21,844,916, against £19,957,342 in 1866, and £18,260,413 in 1865. The exports to Bombay and Scinde presented a slight declension last year; those to Madras exhibited a slight advance; and as regards Bengal and Pegu, there was a considerable increase. It will be seen that in the fifteen years ending 1867, inclusive, the exports of British goods and products to India very greatly increased, the total for each year having been as fol-

lows:—1853, £7,324,147; 1854, £9,127,556; 1855, £9,949,154; 1856, £10,-546,190; 1857, £11,666,714; 1858, £16,782,386; 1859, £19,844,920; 1860, £16,965,292; 1861, £16,411,756; 1862, £14,617,673; 1863, £20,002,241; 1864, £19,951,637; 1865, £18,260,413; 1866, £19,957,342; and 1867, £21,-844,618. Last year's figures would thus appear to be the largest on record. The construction of railways in British India has involved the supply of large quantities of engines, plant, etc., and the exports from the parent State have been increased in consequence. It remains to be seen whether they will be maintained when the work of railway extension slackens.

CHINESE COMMERCE.

The annual report just presented to Parliament shows that the estimated total value of trade carried on under foreign flags in the year 1866 at the ports in China open by treaty, amounted to 299,929,541 taels—an increase of 27,697,493 taels over the amount in 1865, which in its turn had shown as large an increase over 1864. These figures include the amount of the whole import and export trade, including treasure, but deducting re-exports. The total estimated value of foreign imports and coastwise, exclusive of treasure, was 172,462,136 taels in 1866, to which the different countries contributed as follows: Imports from the United Kingdom and its possessions, 71,757,249 taels; Japan, 2,932,568; United States, 289,832; sundry countries, 1,951,132; Chinese ports, coastwise, 95,531,355. The tables of imports, exports, and re-exports from and to the different countries with which China carries on trade gives the following results: The United Kingdom and its possessions, 118,397,130 taels, or £37,492,423 sterling; Japan, 5,591,782 taels, £1,770,730; United States, 6,605,962 taels, or £2,091,891; sundry countries, 4,414,693 taels, or £1,397,985; Chinese open ports, or coastwise, 184,990,002 taels, or £58,580,167; making a total of 319,999,569 taels, or £101,333,196. In 1865 the total was only 89,174,539, and with the United Kingdom, £34,167,531. The amount of tea exported from Chinese ports in 1866 was 1,183,042 piculs, a decrease of 30,299 piculs. The import of foreign opium for local consumption at the open ports increased in 1866 to 64,516 piculs, of the estimated value of 34,838,640 taels. The imports of the year included also the following: Gray shirtings, 2,182,602 pieces; white ditto, 386,740; T-cloths, 427,611; spots and brocades, 233,085; camlets, 133,063; cloths, 91,468; long ells, 161,430; iron, 123,412 piculs; lead, 146,390 ditto; sugar, 1,556,897 ditto; coals, 142,216 tons.

LITHOLOGY OF THE BRITISH SEAS.

M. Delesse recently laid before the French Academy of Sciences a large map of the various beds and rocks constituting the bottom of the British seas. This bottom chiefly consists of sand, slime, more or less mixed with the latter, and different stones. The latter, already consolidated, are anterior to the present period, and do not receive deposits. They stretch far into the sea from the northwest coasts of Scotland, the Orkneys and the Hebrides; they also exist at the mouth of the Shannon and the northwest coast of Ireland. In the British Channel they mark the junction of Cornwall with Brittany; they also mark those of the Isle of Wight and Portland with the Continent. To the east of England, these stony formations are hardly to be met with elsewhere than at the mouth of the Tees and in the direction of Cape Flamborough. They generally form the bottom of the straits and friths that are washed by rapid currents. Shifting deposits are larger, in proportion to the rapidity of the waters that have borne them. The most important consist of sand, which occupies immense space on the Atlantic coast, the Bristol Channel and the German Sea. Gravel deposits, which are not extensive, are to be found on the western coasts, in the Bristol Channel, between the

Land's End and the Scilly Islands, and south of Cork. Flint shingle borders the white cliffs of England, but is also met with in the German Sea in the latitude of the Orkneys. Silty deposits are peculiar to the mouth of the Thames, Southampton Water, Torbay and the Irish coast of St. George's Channel. At various points of the coasts there are marine deposits of mollusks and shell-fish. They are somewhat rare on the eastern coast of England and the Southern one of Ireland, but very frequent in the Irish Sea and all round Scotland, especially in the Minsh, and between the Orkneys and Moray Frith.—[Galignani.]

A DAILY MAIL ROUTE TO INDIA.

Mr. Hyde Clarke, a Cotton Commissioner in Turkey, read a paper at a recent meeting of the Society of Arts on this subject.

Mr. Clarke's proposed line coincides as nearly as possible with what may be called the natural line. Taking Ancona or Constantinople for the point of departure, the way, as the crow flies, to Bombay is right across Turkey-in-Asia to the head of the Persian Gulf. Mr. Clarke wants us to go by Constantinople. Already, he urges, there is railway communication from the European centres as far as Basiash on the Danube, which is near Belgrade. A route of 500 miles, to connect this point with Constantinople, has been granted by the Sublime Porte to a company of English, Belgian and Hungarian capitalists, and the works are to be commenced at four places, it is said, very shortly. Having thus arrived at the Bosphorus, Mr. Clarke would bridge that channel—he does not tell us how—at the Rumelli Hissar, and then carry on the rails by Istimid, Kutahia, Kara Hissar, Konieh, Aleppo, the Euphrates valley, Bagdad and Bassora. Stopping to take our breath after this long imaginary "through route," we find ourselves, of course, at the head of the Persian Gulf. There, even now, a steam service exists, which obtains trade enough between Bombay and Bassora to pay handsomely; and it is all "plain sailing" down the Persian Gulf and the Gulf of Oman to Kurra-nee or Bombay. No doubt, if such a line could be made the journey to Bombay could be performed in twelve days. One speaker wondered whether any nerves could stand twelve consecutive days of railway travel; but delicate travellers might break the journey, and the Americans can teach us how to place sleeping-cars upon the rails. A grave objection is the character of the country. Mr. Clark believes that from Stamboul to Istimid the line might be made for £10,000 per mile; but then would come the heights of Aladag and Codja; while the tremendous range of Taurus must be passed before the line would reach Aleppo. From Aleppo to the Persian Gulf—the valley of the Euphrates—the country is sufficiently well known, and can present no great difficulties. Mr. Hyde Clarke thinks that the line, which would be about 1,500 miles in length, could be constructed for £20,000,000.

BELGIAN TELEGRAPHS.

The telegraphic systems of Belgium, which are managed by the State, have now been established sixteen years, and the cost of their establishment has been entirely covered by the surplus receipts. The annual cost of the service is about 840,000*fr.*; but this sum does not strictly represent all the cost of administration, inasmuch as many buildings occupied, and much assistance rendered by the railway and Post-office *employes* should be included in the general estimate. But, on the other hand, the telegraph gives to the other departments more than it borrows from them, for, according to returns for the year 1866, it appears that out of nearly 312,000 official messages transmitted during the year, 23,000 only were on account of the telegraph service itself. There are 106 telegraph offices in operation in the stations of the State railways, 50 of which are used

almost exclusively by the various departments of the Government, and very seldom indeed by the public. The night service also, which is managed by a staff of 15 clerks, is seldom required for other than messages in connection with passengers' and goods' trains, so that, in fact, it is difficult to estimate the total cost of the service, inasmuch as it receives and gives in return benefits that could not be obtained on equally advantageous terms elsewhere. During the years 1864, 1865 and 1866 the inland messages cost more than they produced, and it was found that all the profit that had accrued arose from international messages—for inland messages require two sets of operations, international messages one set of operations only, and a message in transit merely requires re-transmission, without any cost for receipt or delivery. The tariff for an inland message is now reduced to half a franc, which involves a present sacrifice that could not have been borne unless the result of the first ten years had been superlatively prosperous. The real net profit of the year 1866 amounted to more than 122,000f., and it is anticipated by the administrators that a reduction will shortly take place in the cost of working, and on the average loss on each inland message, and that an increase of profit will obtain on each international or transit message.

COTTON MACHINERY IN INDIA.

A correspondent of the *Times of India* calls attention to what railways are doing for India by instancing the progress discernible in certain districts since the opening of such improved communications as compared with their condition prior to their introduction. It appears that in the beginning of the year 1866 it was even then considered that great progress had been made in developing the trade of the country. A steam factory for cleaning cotton had been started at Khangaum, in West Berar, and one European agent was an occasional purchaser of cotton in the market. Great difficulty was at that time experienced in obtaining work for the factory, and a very limited quantity of cotton could be purchased. There are now two steam factories in full work at Khangaum cleaning cotton; four steam presses are employed from daylight till dark, and cannot turn out a tithe of the work ready for them, and half presses may be counted by the dozen.

In Broach still greater progress is discernible in the development of this branch of trade than in Berar. In the former place there is not only a spinning factory, but steam factories for cotton cleaning may be counted by the half dozen. Steam presses for the packing of cotton for shipment to England, without further pressing in Bombay, have now been at work for two seasons, and the greater portion of the cotton crop is purchased by European agents. This rapid progress of Broach is also mainly attributed to the convenience of railway carriage.

The Dharwar cotton district has made great strides in cotton cultivation, and is the only district in India where the introduction of American cotton seed has been a complete success; but progress in Dharwar has been to a great extent strangled for want of road or railway conveyance. Notwithstanding all that was said a few years ago about the construction of a good metalled road from Dharwar, down the Arbyle Ghaut, to Karwar, it would appear from the latter, to which we have referred above, that "at the present moment it cannot be said that there is even a good road from Dharwar to the coast," and it is urged that "it is of vast importance to so rich a country that the readiest of all means of transport, a line of railway, should at once be made from the centre of the cotton districts in the Southern Mahratta country to Karwar, the nearest and safest port on the coast."

This is doubtless one of those cases wherein expenditure on even the most costly class of communication would amply repay for its construction. Whether such a line would pay as a commercial speculation may

perhaps be questioned, but the indirect returns—by enabling the population of the districts benefited by such works, to pay with greater ease an increase of taxation, which would undoubtedly be the case, judging from the examples of Berar and Broach—would fully justify the Government in undertaking the construction of the proposed railway. Hitherto, we believe, not one single mile of railway in India has been constructed by the Government. Such operations seem by a tacit kind of acknowledgement to be the special province of guaranteed companies. But why should the Government not undertake similar works in places where it could be done without interfering with the vested interests of existing companies? This is, however, a subject of too much importance to be treated in all its bearings at the end of an article bearing only indirectly upon the matter; we shall, therefore, return to consider it more fully upon a future occasion.

ART. VI.—DEPARTMENT OF AGRICULTURE.

1.—THE CONSUMPTION OF SUGAR.

FROM an elaborate review of the sugar trade for the year, in the *Produce Markets Review*, we extract the following estimate of the consumption of the different countries:

Roughly dividing the nations into classes, the interesting fact is shown that the Anglo Saxon races—Great Britain and her colonies and the United States—are the most important sugar consumers, as they use 1,420,000 tons of sugar per annum, or 41.40 lbs. per head. The Latin races come next; and France, Italy, Spain, Belgium, Portugal and Switzerland use 506,000 tons per annum, or 12.34 lbs. per head. The third on the list is the great Teutonic race, but with the late impetus given to its national life, and the much greater scope for enterprise and commerce, Germany, with its domestic social life, will soon rise in the sugar scale. The Zollverein, Austria, Holland, the Hanseatic League and Denmark, consume 262,000 tons per annum, or 7.30 lbs. per head. Last comes the vast but poverty-stricken districts ruled over by Russia, together with the semi-barbarian Ottoman empire and the kingdom of Greece. We will venture to call the nations formed by this group the Slavonian race, trusting that the Ethnological Society will pardon this our last and greatest sin against ethnological correct division. Russia, Poland, Turkey and Greece consume less than half what is used by the smallest civilized European consumers, the Teutons, and the deliveries in those countries only amount to 125,000 tons, or 3.30 lbs. per head. The quantity of sugar used in the rich countries depends upon its price, and the low rates of the last few years have given an extraordinary stimulus to the deliveries. What effect the reduction of stocks may have upon prices we cannot of course predict, but we certainly do not anticipate that the prices prevailing before the American war will ever be kept up again for any length of time. The sources of supply at present worked are so numerous, the cultivation of sugar can be so indefinitely extended, and, even at the late and present low rates, is so remunerative, that all possible demands can be met; and, as the wealth of civilized communities increases, we anticipate a progressive increase in the use of sugar. In fact, the figures that we consider so large at present, will, if the late rates of progress be maintained, soon be considered utterly insignificant. In round numbers, the British consumption for 1867 may be estimated to be 625,000 tons. On the scale of New South Wales it would amount to 1,250,000 tons per annum. The total consumption of the 312,972,000 souls,

from whom returns can be obtained, is 2,035,000 tons per annum, or 15 lbs. per head. On the British scale of consumption, it would amount to 6,150,000 tons; on the new South Wales scale to 12,900,000 tons. The growers of sugar, therefore, need have no fear of extending cultivation too far."

2.—SUGAR-MAKING IN FRANCE.

The official account of the production and consumption of beet-root sugar to the end of November gives the following results, as compared with the same period last season:

	1867-8.	1866-7.
	Tons.	Tons.
Manufactured.....	120,553	101,939
Consumed.....	64,078	43,288
Stock.....	72,299	70,709

Last season, at the same date, the exportation was only 3156 tons out of 43,288 tons, against in this year 12,978 tons out of 64,078 tons. There were at work, at the end of November, 449 sugar-houses, against 435 at the same period last year; and it is anticipated that the make will exceed the estimated 200,000 tons.

3.—KNAGGS' PROCESS OF CANE SUGAR-MAKING.

Up to the abolition of the slave trade, the West India plantations offered enormous sources of wealth, but with that revolution in the labor market, added to the beet-root sugar manufacture, the circumstances have very much changed. But cannot a fortunate combination of chemical and mechanical science, by greatly reducing the amount of hand labor required, dispense with the negro and replace him with European skill? Up to the present, the only compensation made by modern science to the West Indian sugar planters for the discovery of beet-root sugar has been the vacuum pan; but we feel convinced that, sooner or later, a judicious utilization of European chemical science and machinery may effect a complete change in the condition of the West Indian Islands. A remarkably scientific and carefully considered attempt in this important path is a new process of cane sugar-making, the invention of Mr. Walter Knaggs, a sugar planter of long standing, of the Seven Plantations estate, Lower Clarendon, Jamaica. It is impossible to examine his plans without concluding that they are the result of much thought on the part of a man thoroughly versed in the practical and theoretical conditions of the process. Starting from chemical first principles, Mr. Knaggs considers—and we believe that the most organic chemists will bear him out—that the three main points to be observed in making good sugar are: The complete clarification or purification of the juice; a rapid evaporation, out of contact of air, of this juice; and its granulation at a low temperature into sugar. These conditions, as might be expected from the quality of West Indian labor, are but imperfectly observed, as the entire series of manipulation is practically in the hands of the negro.

In a tropical climate the cane juice begins to acidify as soon as it is exposed to the air, and this takes place at the ends, or at any accidental rents caused by carelessness in the outside skin of the cane. The ripe stalk should hence be ground as soon as possible after being cut. Even when this takes place, often after a delay of days, the juice on being expressed has to run over surfaces on which old juice has acidified by contact with the air. The important process of clarifying the sugar by the addition of lime is generally carried out most empirically without rule or measure; often by some old boiler-man, who acts on the tradition

that, say, his father used a certain proportion of lime to so many gallons of juice. The cane juice is therupon boiled in a number of coppers exposed to the action of the air for several hours and the consecutive night. The next day, and without being properly skimmed, the liquor is what Mr. Knaggs terms "fried down" at an unduly high temperature, to a mixture of sugar and molasses. As the laziness of the negro keeps him from properly skimming, the juice being boiled down in the coppers, the lime added to the juice combines with the acetic acid, formed in the liquor during the lengthy time it is being boiled and exposed to the air, and this again sets free the feculencies with which it was in combination. Mr. Knaggs shows that one of the most injurious agents in the cane sugar manufacture is the acetic of lime formed by the combination of lime with the acetic acid in the sugar. The acetate is decomposed at the high temperature of, for instance, the sides of the copper, and the constituents thus set free act on the sugar. Mr. Knaggs, in concluding his indictment against the use of lime in cane sugar making, reminds the practical planter that some kinds of cane juice are completely intractable to lime, and can never be clarified by its use.

To overcome what may be termed the chemical difficulties in making cane sugar, and also to obtain, as will be seen, numerous advantages in the mechanical manipulation, Mr. Knaggs' employs the permanganate of soda or potash as a substitute for lime. The juice is, of course, expressed from the cane by passing through rollers as usual. This operation was, by the way, lately performed in our presence at the Eriti works of Messrs. Easton, Amos, and Anderson, by passing the canes through a set of plate rolls. To prevent the acidifying of the juice, it is at once treated with sulphurous acid gas, which is forced into the liquid. It is then as quickly as possible brought up to the boiling point, and the scum taken off. It is the application of the sulphurous acid which enables the application of this system of clarifying, in which the sugar is boiled prior to being limed. The sulphurous acid gas prevents the spread of acidity in the clarifier, and is after neutralised by the addition of clay. During this operation the liquor is being well agitated, and a small quantity of manganate or permanganate of potash or soda is added "until a visible separation of flocculi is apparent." It is then drawn into the "subsider"—a vessel intermediate between the clarifiers and the evaporator—when it is tempered with lime. The juice is then allowed fifteen or twenty minutes for its impurities to subside to the bottom of the vessel, leaving the cane juice quite clear.

Now the great and distinguishing feature of the juice thus treated is, that it requires no skimming, with the important consequence that it does not require to have its water evaporated in open coppers. It can, therefore, be speedily concentrated into syrup out of contact with the air and also, we may add, beyond the control of the negro manipulators, who are apt to pilfer the juice in large quantities. There then only remains the operation of granulating that syrup into sugar.

In finding a substitute for the series of coppers, decreasing in size, in which the syrup, at a great waste of sugar, fuel and labor, is boiled down, Mr. Knaggs has kept in view the desiderata of rapid evaporation at a low temperature, combined with economy of fuel. His evaporator, mainly consists of an oblong tray, with a double bottom. Steam is admitted to this double bottom, which communicates with a number of tubes laid transversely across and close to the bottom. The cane juice is supplied on the tray by a pipe at one end, and as it flows from the inlet and to the opposite outlet of the boiler, it is rapidly brought into ebullition, by means of this extensive steam-heated surface. The particular form of evaporator shown in the engraving is constructed to generate its own steam. This is done by partly filling the double bottom with water; and the heating surface may be greatly increased by the employment of a number of vertical tubes, made double for the sake of the circulation of the water. The tray supplied with the juice has a double cover, in which

is a pipe for conveying away the steam evaporated from the juices. This feature of the apparatus is of great importance in the West Indies, where water is often scarce and fuel always dear. This steam boiler evaporator is of course made with the usual fittings of a steam boiler.—*The Engineer.*

4.—THE DIFFERENTIAL SUGAR DUTIES AT MARSEILLES.

IMPORTANT TO SHIOPWNERS.—A dispute in which English shipowners are interested has just arisen between the sugar refiners of Marseilles and the French Customs' authorities. According to the French legislation, the raw commodity, when imported in foreign vessels, pays a differential duty of 50c., or 1 fr. per 50 kilog. (1 cwt), according to the country, English craft paying the smaller sum. As the French flag is exempt, importers in foreign bottoms, to effect sales, have always been obliged to make to purchasers a reduction equal to the amount of the additional tax. For the last four years this practice has prevailed, and the legality of the charge has never been contested until quite recently, when an English firm having sold a cargo in a British vessel to a sugar refiner of Marseilles, the latter asked for the usual compensation for the extra duty. The seller, however, objected, alleging that, as sugars imported into England in French bottoms paid the same duty as those in English ships, a reciprocal right must exist in France. The Convention of 1864 was in consequence examined, and Article 4 was found to declare, in terms certainly rather ambiguous, that the contracting parties, England, France, Belgium and Holland, would fix a single import duty, corresponding exactly to the unvarying amount of the drawback to be allowed on the exportation of the refined article. The result of this interpretation is that the French Customs' authorities have for the last four years been levying a differential duty which was not due. The Marseilles refiners immediately sent in a claim for the reimbursement of the sums thus paid, but during the last twelve months only, as there is prescription in such matters after a year. The application has been forwarded to the Minister of Commerce, and the parties interested have sent delegates to Paris to support their demand. Should they succeed, the amount they may recover will be a clear profit, for the burden formerly fell, not on the purchaser, but on the foreign importer; but as the deduction was made in the price tacitly, and was not mentioned on any invoice or contract of sale, and the duty was always paid by the refiner on clearing the sugar from the bonded warehouse, he of course can alone make a legal application. Importers in foreign ships have in the meantime changed their mode of business, and sell on the basis of the tariff for French bottoms, with the promise that the allowance of the differential duty shall be made only if necessary.—*Galignani.*

THE COAL SUPPLY—GREAT BRITAIN VS. UNITED STATES.

Ten years ago the quantity of coal mined in Great Britain amounted to sixty millions of tons per annum. The increase since that time has been fifty per cent., so that at present the quantity of coal annually mined in Great Britain amounts to one hundred millions of tons, large quantities of which are every year exported to Continental Europe, and even to this country.

In a speech made in Parliament last year by Mr. Gladstone, he dwelt at length upon the importance of coal as the motive power of factories and commerce. He stated that the commercial and manufacturing superiority of Great Britain was based on coal; that with the exhaustion of coal in Great Britain, the commerce and manufacture of Great Britain must decline; and that as the United States contained the largest deposits of coal in the world, this country in course of time must surpass all others in commerce and manufactures.

While the exhaustion of coal in Great Britain has become a question of serious consideration to her statesmen, it is most gratifying to know that the coal fields of the United States are without a parallel for the great extent and superior quality of their coal.

Pennsylvania, east of the Alleghanies, supplies the Atlantic towns and cities with anthracite coal, while Pennsylvania, west of the Alleghanies, supplies the towns and cities on the Ohio and Mississippi Rivers with superior bituminous coal. The valley of the great Kanawha River, in West Virginia, contains the finest deposits of splint and coal known anywhere, and we are pleased to see that parties in this city owning coal lands in the Kanawha regions are taking steps to insure the improvement of the Kanawha navigation, whereby this city can be supplied with cannel coal equal to the best English cannel, and at about one-half of the cost thereof. The plan is to improve the Kanawha navigation, and ship coal to this city via New Orleans.

A most favorable charter for that purpose has been granted by the Legislature of West Virginia to Messrs. Pierrepont, Aspinwall, Crosby and others of this city.

A copy of the prospectus, containing the charter and setting forth fully the plan of operations has been recently issued, and in it is stated that Great Britain exported to this city last year 214,000 tons of coal—a large portion of which was cannel coal. Thus, it seems that this city pays every year to Great Britain for cannel coal sufficient money to improve the navigation of the great Kanawha River, and thereby open to market the finest cannel coal deposits known in America.—*Amer. R. R. Jour., N.Y.*

ART. VII.—COMPLIMENT TO THE PROGRESSIVE PRESS.

A large class of the principal merchants of St. Louis, in making a personal compliment to the commercial editor of the *Missouri Democrat*, have furnished the occasion of some practical expressions of opinion in regard to the situation and prospects of St. Louis. The chief point, however, seems to be the independent manner in which the *Democrat* has stood up to certain ideas, novel in themselves, and supposed inimical to certain vested interests. St. Louis and New Orleans are as inseparably and intimately connected as the Siamese twins. If St. Louis cannot prosper except with the river outlet, and with every facility of transhipment at New Orleans, it therefore follows that whatsoever St. Louis shall propose with respect to her foreign trade must be imperfect without the co-operation of New Orleans. We copy, however, the proceedings on the complimentary presentation referred to, considering them, to some extent, applicable to all other cities in which a change of commercial system is necessary:

REMARKS OF E. O. STANARD.

The merchants of St. Louis the past year have noticed with great interest the able, practical and progressive manner in which the commercial column of the *Missouri Democrat* has been edited. [Applause.] The wants of this great and growing commercial centre have been so graphically portrayed, and necessary revolutions in handling our commerce so earnestly advocated, that it could not fail to challenge the admiration of every thinking merchant and interested citizen. [Applause.] Our produce trade in the past has been too much of a local nature, and our antiquated manner of handling grain in bags—instead of in bulk, in barges and through elevators—thereby adding an enormous extra cost to the producer as well as the consumer, has to a great extent circumscribed our limits, and diverted a large trade from us which we should have controlled, and which naturally belongs to this city. Nature's laws are unerring, and will not fail to yield prosperity and happiness to man if he performs his part and avails himself of the opportunities for greatness which she presents. Our great river, fed by innumerable navigable tributaries, running through a valley three thousand miles in length, which produces everything necessary for the prosperity and comfort of man,

kind, in future to a far greater extent than in the past, is bound to be turned to good account, and we believe we are now on the eve of great prosperity. [Applause.] The eyes of the world are now turning towards our great natural and commercial resources. Direct shipments of bulk grain and the products of our own manufactories are being made by way of New Orleans to our Eastern as well as to the foreign markets of the world, and importations of such articles as we require are coming back by the same route, and this trade must soon assume immense proportions, and for these practical results and the new life which pervades our trade, the merchants of St. Louis feel they are under great obligations to the press, and more than to any one else do they feel indebted to Col. Coloney, commercial editor of the *Missouri Democrat*.

REMARKS OF MYRON COLONET.

Gentlemen—What can I say to you? How can I properly thank you? Words are too ungainly to express to you, as gracefully as I would, the sentiments of deep gratitude and unequivocal delight which this manifestation of your appreciation of my efforts, through the commercial columns of the *Democrat*, has awakened in my mind. I never expected so high a compliment at your hands, and have never shaped the course of my columns with the view of any personal benefit other than that which is born of an inner consciousness of having faithfully and impartially striven for the general good. [Applause.] It is needless to multiply words, gentlemen: I know you neither desire nor expect any wordy harangue from me, as what I have to say commercially is always best said in the *Democrat*. There are other gentlemen here who fully appreciate the importance of the great measures I have endeavored to assist in inaugurating and who may have something to say in support of them. And just here it seems proper for me to remark that of myself, in this long and fatiguing contest over "through shipments," "shipments in bulk," "reductions of insurance and commissions," "elevators and drying facilities," I could have accomplished absolutely nothing. But I was sustained and encouraged by the liberal minded publishers of this paper, [applause] and when private interests have recoiled before my commercial articles and the persons who have fancied themselves damaged have come to the proprietors here with their complaints they have been universally referred to me. My employers have constantly thus shown to me that they placed the utmost reliance upon my ability to give direction and force to the Commercial Department of their paper, and so preside over it that it should not only serve the best interests of the greatest number, but win standing for the *Democrat* as a commercial journal. Had the publishers of this paper cramped me down to a simple *reporter's* duty—as it was often and often predicted by my enemies that they would—the *Democrat* could not possibly have gained any commercial pre-eminence. But they never treated me as a *reporter*, but constantly encouraged me to edit my department, recognizing the great truth that a paper of positive opinions is sure of success, even though it occasionally makes mistakes. [Applause.] But besides the support received from my employers, I have been upborne, assisted and encouraged by a large number of the gentlemen now standing around me. The tried old saying that "luck helps those who help themselves" has proven a great truth in my case, for no sooner did it become apparent that I really desired to help myself than the special kinds of information I required turned up to me from unexpected quarters, everywhere. Commission merchants read to me their private letters, introduced me to their friends; took extra trouble to procure the exact information I sought. Many firms did this, but none more conspicuously, constantly and effectively than the firm of Updike, Bain & Co. My friend George Bain, there, has stuck by me like a brother throughout all the battle upon the questions which we have fought for so successfully. [Laughter.] We first trained our batteries together last fall upon the Board of Under-writers, for passing an obnoxious resolution, discriminating against barges, and compelled them to pull down that black flag, [laughter,] and since that time I am free to acknowledge he has given me a great many facts and a good many figures, calculations and other valuable matter it would have been extremely difficult for me to have obtained elsewhere. But quite often, as he will freely tell you, I have held and expressed in my paper opinions exactly contrary to those entertained by himself. I mention friend Bain, gentlemen, because he has so richly deserved this acknowledgment at my hands: at the same time I beg you will each and all of you accept my most hearty thanks for individual co-operation with me in this great grain enterprise, and many other forward movements advocated in my department. In conclusion let me add, that as I have honestly and faithfully labored for the interests of the city and State through the commercial columns of the *Democrat* in the past, so I expect to continue in the years to come. [Applause.] I am ambitious of no position in life better than that which I now hold, and believe I can accomplish more good to the community at large as the commercial editor of this influential and widely circulated paper than in any other position in which I could be placed. Gentlemen, again I thank you for your magnificent gift, and for the flattering avowal of your high regards accompanying it. [Loud applause.]

REMARKS OF L. B. SHYOCK.

Gentlemen—I feel highly complimented and no less pleasure in being regarded one of the friends of the gentleman whose courtesy has brought us together on this occasion, and I am happy to be able to add a mite to the well deserved compliments he has to-day received. When I say well deserved, I mean it in no ordinary sense, but in the highest import of that term. I have observed with great pleasure his efforts for a year past, through the columns of his invaluable commercial journal, to turn the attention of our

merchants and shippers generally in the West to the great advantages, as well as sure profits, to be realized by shipments of grain in bulk and otherwise down our great channel of communication, the Mississippi River, to New Orleans, and thence by steamers to the markets of the Atlantic seaboard and Europe. Such was the irresistible force of his arguments, experimental shipments were soon commenced, and notwithstanding every possible barrier was thrown in the way, not only by croakers, old fogies and jealous railroad managers, and rival cities to St. Louis, these experiments have proved a great success, paid handsomely on the investment, and established the fact beyond a doubt that St. Louis by proper effort in the direction proposed by Col. Coloney, can re-establish herself immovably in the position he claims for her—the great commercial centre of the Mississippi Valley, and the greatest grain depot of the Northwest. [Applause.] The fact is being demonstrated every day more clearly that the great river that washes our eastern border, and on which our city's commercial marine boats to the Gulf, is and always will be our best and cheapest highway to the markets of the world, and whatever may be the improvements made by railroads and artificial means of communication with the different parts of the country, after all the great Father of Waters is our main dependence for moving heavy goods and grain to their proper markets. This fact has been so fully disseminated by the "wide-awake" commercial editor of the *Democrat*, and what is better still, proven conclusively by the experiments inaugurated by his influence, that I wonder there can now be found in our city "old fogies" yet declaring the impracticability of such a route. [Laughter and applause.] But, gentlemen, do not understand me as speaking disrespectfully of this portion of our community, for their name is legion, [applause] and they can boast of having been in the majority in nearly every city in the old world, and seem quite proud of their antiquity, as well as their residence and influence on this continent. Their fathers, as far back as 1631, shut up in prison the bold young astronomer Galileo, for daring to assert the undeniable fact that the earth moved on its axis and performed a diurnal revolution, which it has ever since continued to do, "their opinion to the contrary notwithstanding." In later years their lineal descendants in this country laughed to scorn the proposition of Prof. Morse to chain the forked lightning and send it quick as thought a postboy round the world. These same "unbelievers" regarded Cyrus W. Field an enthusiast or madman when he declared the entire practicability of connecting the old and the new world by the Atlantic cable. [Applause.] But, gentlemen, "there is life in the old land yet"—the ear of commercial progress has been pushed along despite these fossil impediments. The experiment recently made of smelting iron with Muddy River coal, has proved a complete success, by which St. Louis and the State have opened a mine whose wealth far exceeds in value all the gold ever found or ever will be discovered in the ridges and valleys of California and Australia. She needs to make one other step to give her a commercial supremacy that will defy all competition, and hasten her to a position that she must inevitably occupy very soon—the great commercial and manufacturing centre of the Mississippi Valley, if not of the continent. I allude to giving her prestige and influence to the proposition I have recently brought to the consideration of the Board of Trade of St. Louis, to reopen the Bayou Manchac, in order that ordinary Western river steamers may load at our wharf with produce—especially grain in bulk—manufactured goods of all descriptions turned out of St. Louis workshops and foundries, and land alongside vessels anchored in the deep waters of Mobile Bay, and discharge into them the shipments made from here to the Atlantic seaboard or the markets of the old world; also to deliver supplies to the city of Mobile for the immense country tributary to that city, and receive return cargoes of salt, coffee, sugar, hardware, queensware, dry goods, and in fact nearly three-fourths of the goods now received here by expensive railroad routes, could reach St. Louis by this inner passage to the Gulf at a rate so cheap our merchants could undersell all Western competitors. [Applause.] May I not hope the great importance of this enterprise will commend itself to our friend Coloney, and that, by the power of his pen, aid in making it, as he has the project of through grain shipments, a complete success. [Continued applause.]

REMARKS OF NATHAN COLE.

Gentlemen—It gives me pleasure to respond to your call and to heartily endorse the object for which we are convened. The question is whether the grain and the other products of our country will not eventually find their outlet to the Gulf of Mexico, the same way that the waters of the Mississippi valley now find their way to the great ocean. I believe, gentlemen, that we have arrived at the point where we are beginning to see this great revolution, so long and so ardently hoped for by all lovers of our city. I feel that it is an accomplished fact, and that soon—not many years from now at the farthest—all our complaints of the past will be forgotten, and that we shall strike hands, not only with New Orleans but with Mobile via Bayou Manchac, and thereby with all the nations of the earth. [Loud applause.] I believe that these results will be brought about sooner than the most sanguine have anticipated. We are on the eve of this great revolution—and I am glad that our friend here, who is a whole colony—[Great laughter.] I say I am glad that he has the honor to stand in the precise gap that he does, to wield his ready pen and to spread the thoughts of his active brain upon the broad page of the *Missouri Democrat*, to be sent forth from this place in every direction to show the world what St. Louis is, and what Missouri is, and what they are destined to become. I recognize in him the true representative of the press—that great power which moulds the minds of the people and elevates public sentiment, and I thank the *Missouri Democrat* and other papers in this city for the positions they have taken in reference to these great enterprises.

There is one thing in this connection that I desire to say, and in regard to which I cannot quite agree with the gentlemen who have this movement in charge, and that is the reduction on commissions. [Laughter.] It is said that there are tricks in all trades, but the commission business, I contend, is an exception. [Renewed laughter.] I hope you will indulge me for a moment, as I see many of our honorable fraternity before me. I contend that in inaugurating this enterprise we shall do it on the principles of commercial honor, integrity and manliness. [Applause.] I contend that we should not be brokers or speculators, but that we should stand as commission merchants, claiming our rights—the rights of 2½ per cent established since the history of commerce began, as the value of the interchange of commodities between man and man. How has this state of things been arrived at? Are we wiser than our fathers in many of these important respects? Nay, verily, what would you think of that life insurance company which should guarantee to you and to your children a policy for one-half that the responsible companies would issue it for? Would you not discard such a company? Undoubtedly you would. You cannot go to any city on the continent of Europe to-day and do business with any responsible house for less than 2½. It is a fixed measure of value. You cannot go to New York and do business with houses of means, influence and honor for less than that. And so, gentlemen, I do contend that we are wrong in these things. All we ask is that we shall sustain the honor of our commerce by standing up for that which is right, and which has been determined by all the nations of the earth, civilized and half civilized, up to this period of time. Eight years ago we got our 2½ per cent on sales. Chicago at that time was selling corn for 35 to 40 cents a bushel, and oats for 20 cents. They were then getting 5 per cent and we 1 per cent a bushel. I will ask you, gentlemen, if the grain products of the world are not better able to pay these rates when values are high than they are when they are low? I say then, gentlemen, we should maintain this position before the world, that the commission merchant is entitled to 2½ per cent.

REMARKS OF R. S. ELLIOT, ESQ.

It is not altogether improbable, but, gentlemen, the population of this Mississippi Valley is rapidly becoming the mightiest of all. Here are five States that assume the control of the Mississippi River—Illinois, Missouri, Iowa, Wisconsin and Minnesota. In 1861 they embraced a population of 4,500,000. At the same per cent of increase preceding 1861, we shall have 6,000,000 in 1871, over 8,000,000 in 1883, and 11,000,000 A. D. 1900. Heaven! what a mighty audience the pen will then address through the columns of the *Democrat* and other leading newspapers of St. Louis.

The inevitable tendency of the present time is to build up and maintain leading and powerful journals, like the *Democrat* and *Republican*, for instance, here in St. Louis. It is thus that they are enabled to command the first talent and the ablest writers; and, continually improving on the experiences of the past and anticipating the wants of the future, who shall estimate the immense influence which the pens of newspaper writers, connected with such leading journals, will exercise upon the great interests of the Mississippi Valley and of the whole country!

REMARKS OF MR. BAIN.

Gentlemen—I have here, not exactly a written speech, but a document more eloquent, to my mind, than any written speech, viz: the following account sales of a part of the first lot of wheat ever sent down the Mississippi River direct for Liverpool. [Applause.]

Statement.—Account sales 2000 bushels wheat ex John Geddie, McDougal, master, from New Orleans, and sold by John K. Gilliat & Co., per order and for account of Messrs. Kehl, Updike & Co., New Orleans. Payment 1 and 2 months:

1868.		
March 25.	By 270.60 cents at 13s. 11d.	218 17 2
	By 270.63 do. at 14s.	189 8 5
March 26.	By 45.14 do. at 14s.	283 13 7
March 27.	By 236 do. at 14s. 1d.	159 2 10
April 3.	By 14.43 do. at 9s. 1d.	7 3 1
		2825 7 1

CHARGES.

Entry, dock and town dues	218 10 11
Landing and delivering	7 8 5
Freight 17/8 bushels, 1s. 3d.	123 12 6
Postage stamps, etc.	3 7
Primage 5 per cent	6 3 8
Insurance, 2½ at 4 per cent	42 6 8
Policy duty 3d. per cent	3 6
Exchange on London 2 per cent	2 1 5
Brokerage, ½ per cent	4 2 10
Commission, guarantee, etc., 3½ per cent	98 19 10
Net proceeds	2594 18 3

E. & O. E.
Liverpool, 8th April, 1868.

JOHN K. GILLIAT & CO.
per R. Phillips.

I feel confident that this is but the dawn of a new era in the grain shipments of this great valley; and I trust that the day is not far distant when the doubters in regard to the practicability of this and other great enterprises which are to build up and render this city a live city, will have totally disappeared from the face of the earth. [Applause.] And I verily believe that the commercial men of the future, in this city, will regard one of these old fossils very much as A gassiz might be supposed to look upon the vestiges of a pre-Adamite. [Laughter and applause.] Gentlemen, it gives me pleasure to introduce to you Mr. Cameron, of Liverpool, who sold Mr. Merry's wheat that went down the river in barges.

REMARKS OF MR. CAMERON.

Gentlemen—I am highly pleased to meet with you upon this occasion. I have listened with much attention and pleasure to the remarks made by the several gentlemen who have preceded me, in regard to the great emporium that St. Louis is destined to become; and I trust that business will continue to move, as it appears to have done in former years, down the Mississippi River. We have had many contracts and much business by that source, and we have always felt it to be much more convenient, much more profitable and much more satisfactory than by the railways across to New York.

In regard to this wheat that we are now talking about, when I was down in New Orleans I saw Mr. Merry there; and there were many doubts cast on this project there—doubts as to the state in which the wheat would be received, in having to pass through the different stages, subjected to mold and all kinds of disadvantages; but I am proud and happy to say that the wheat arrived in good order, and I trust has been sold to the satisfaction of those interested. [Applause.]

I hope that this shipment will be but the precursor of many future shipments, and if gentlemen will consign their produce to the house I represent, [laughter and applause,] we will give them the same satisfaction that the gentlemen have manifested in whose behalf the above sales were recently made. [Loud applause.]

COL. GROSVENOR'S REMARKS.

Few, I think, picture in their brightest dreams the glorious future that cold common sense tells us is now within the grasp of St. Louis. A future when we shall have made this city not only the steamboat city, but the iron city, the wheat city, the lumber city, the pork and cattle city, the machine city and the railroad heart of the nation [loud applause]; a city full of live men, whose people shall have been thoroughly waked up, and where no large estates shall be held by walking corpses. [Laughter.] A grand city whose streets shall ring with the clank and the rattle of machinery, and where all night long the light from a thousand furnace fires shall make perpetual dawn upon the horizon. [Loud applause.] A grand city whose active men and whose merchants shall no longer send their sand and their ore to Pittsburgh and bring from that place their glass and their iron, but, uniting in fruitful wedlock the ores of Missouri and the coal of Illinois, shall laugh at tariffs and throw down the gauge to Birmingham. [Loud applause.] A grand city whose active men shall tame and master in this very State a water power greater than that which turns all the wheels of Massachusetts. [Renewed applause.] A grand city from which the loaded cars shall start every day to St. Paul, to New Orleans, to Omaha, to Denver, to Galveston, to Mobile, to Charleston, to Savannah, to Norfolk, and through which there shall pass the mails from Europe to Asia, calling back in return long trains freighted with "the wealth of Ormus and of Ind." [Loud applause.] A grand city, whose shippers shall send their cargoes direct to every port on the Atlantic; bring Liverpool to be our next door neighbor, and make New Orleans our porter's lodge. [Laughter and applause.] A city of two millions of people, active, enterprising and wide awake; a city, at once the workshop and the counting-room of the Mississippi Valley, the great heart of the continent, whose strong pulsations shall send the life-blood in every extremity. [Prolonged applause.] Is it a dream? ["No," "no."] Then, my friends, remember that those men win in this world who work to crystallize their brightest dreams into solid facts. [Applause.] Let us then work together from this day, men of St. Louis, to realize the St. Louis that shall be. [Three cheers.]

Gen. J. F. Shepard was next called out. He responded as follows:

REMARKS OF GEN. SHEPARD.

It strikes me that everything that can be said on this occasion has been said; and certainly, after the eloquent speech of my senior, I can hardly venture to say anything to the merchants of St. Louis that will at all inspire them.

I may say, however, in behalf of the proprietors of the *Democrat*, that everything that it is possible for a newspaper to do in the development of the interests in which you are so intimately connected, will be done. I can say for them that but one impulse and one motive animates them, and that is, to build up the material interests of St. Louis and the State of Missouri. [Applause.] Notwithstanding what has been said, gentlemen, you do not realize the important relations which you sustain not only to the great Mississippi Valley, but to the nation at large. It is true that nature has given you every possible opportunity to develop the grandest results. Our State abounds not only in mineral wealth beyond calculation, but in agricultural resources that have no limit. It is the home, *par eminence*, of enterprise in the future. But, as we are taught in the parable, the seed that is sown always requires time to germinate, and it has seemed to me that the great fault of the people of St. Louis has been that they expected immediate results, instead of planting for the future. [Applause.] It is true of everything that presents itself in the present that you are to take hold of it with energy and enterprise, for its future development, and not for its present and immediate fruits. This great grain enterprise, which has been the main cause, I suppose, of this gathering to-day, is perfectly practicable, but the work cannot be accomplished this year nor next; but, if you keep at work steadily and persistently, in ten years from now you may see the grand results of your present labor. But it requires that you should not be discouraged about it next year nor the year following.

So it is with the material interests of St. Louis in other respects. The Carondelet furnace has just demonstrated that the best iron may be manufactured from the mineral coals which abound all about you; but it is not to be wholly accomplished immediately. It will take time to develop this great iron problem. And so with all your interests in commercial relations; they depend on the development of these primal great enterprises, and they are in your hands.

I can only say, therefore, that it is the purpose and intent of the proprietors of the *St. Louis Democrat* to advocate every interest that looks to the great future, whether it pays for the present or whether it does not. [Applause.] It is for you, merchants of St. Louis, to take hold of the enterprises as they arise, and put them through, one after another, without any let or hindrance, whether immediate results follow or whether they are delayed.

One gentleman has referred to the opening of the Manchac pass. You received the reference joyfully, gladly; but what ought you to do? It was stated at the Board of Trade the other night, that an appeal would be made to Congress for \$250,000 to prosecute this work. Why, if you appreciated your own interests, gentlemen, in less than six month's time that \$250,000 would be forthcoming from your own pockets, and you would be clearing that pass, and your boats would be loading cargoes for Mobile. [Applause.] You, gentlemen, have the key to unlock the material prospects of this great valley, beyond all other men, and it rests with you only to develop them. I would say, therefore, in concluding, remember your responsibilities, and work not only for the present, but especially for the great future which is in your hands to mould.

REMARKS OF MR. BEACH.

I am gratified that the commercial editor of the *Democrat* has not neglected to number grain dryers as one of the important facilities to be added to this grain route for the protection of shippers. The business of grain drying is yet in its infancy, but is rapidly growing to be necessity on the great grain carrying routes. On the great lake and canal route—at Chicago, Milwaukee, Buffalo, Oswego and New York—warehousemen are fully alive to its importance and are rapidly preparing drying facilities to repair the frequent losses in heated and wet grain. Gentlemen, you are calculating on converting this magnificent river into a grain carrying channel. Now let me say to you that when the shippers of the millions of grain which will soon be coming from the great western slope of the Mississippi shall reach this river, and looking along its banks shall see no provision made for taking care of their grain, which may be damaged by water or climate, they will be compelled to call for more bridges, that they may roll on their grain to a route where this provision is made. In short, grain dryers are indispensable to the success of your great enterprise.

It will be but a few years, gentlemen, before grain drying will assume an importance not now appreciated. At present, not more than one-third of the State of Illinois is developed in its grain growing capacity, and how infinitesimal a portion of the great western slope of the Mississippi Valley.

In a few years we shall be compelled to create a foreign demand for our corn, and it will only be done by sending it there in a condition to make bread when it arrives. The corn we send now will not cross the Atlantic in good condition, and the bread made from it compares poorly with the delicious article we have on our own tables. Drying will prepare this corn for shipment to any point, and thus grain dryers will become a source of national wealth.

COL. F. W. CRANE'S REMARKS.

Colonel Crane had heard a good deal said about grain, and iron, and furnaces, and other important interests of St. Louis, and not one word yet about "the hog." [Applause.] He wanted the merchants of St. Louis to understand that in a meeting of this kind, where gold watches were lying round loose, "the hog" could not be kept out. [Renewed laughter.] The truth is, gentlemen, said the speaker, I am a broker, and deal in the article of swine's flesh pretty largely, and have a word to say about the animal, as well as brokers. The broker keeps the commission merchant posted on the state of the markets. He is in continual telegraphic communication with all the different markets of the country, and this expense is a necessity of his business if he is a live man, and the commission merchant and others naturally look to him for information. This is of the first importance to the individual merchants, and you understand this, and know that just in this thing is where the broker makes his business and gets his commissions. The broker's position is fully recognized in all the markets of the world, and its importance is appreciated. And here let me say that I think it a fundamental mistake to establish and insist upon high commissions in provisions. On this point I differ, in both principle and practice, from remarks that have been made here. It is, in my judgment, a mistake to assume that two and a half per cent. is the minimum of brokerage charges on large transactions in this line. In Chicago they do business for one per cent. We can do it as well in St. Louis; and I tell you now, gentlemen, I will do business for parties outside of St. Louis for one per cent., and for those who reside and do business in our great city, I will do it for one-half of one per cent. [Applause.] Some one asks if I will guarantee sales? Yes, gentlemen, I will guarantee sales; and let me tell you I never make a sale I do not guarantee. The truth is, heavy percentages drive away trade, and in this new era of building up our city, in which I have as profound an interest as any one, we must not be outdone by any city on the globe. [Applause.] We can rule the Valley, gentlemen, and coming back to my starting point, I say in closing, "let us go the whole hog." [Laughter.]

EDITORIAL.

ALLEGED BLUNDERS OF THE CONFEDERACY.

WE have admitted to our columns an able and temperate article from the standpoint of its author. We have done so because it illustrates very well the difference between ourselves and other disciples of the State rights doctrine. The author of the article charges the failure of the Confederate cause on the blunders of the administration. These blunders are thus enumerated: 1. A want of political foresight. The writer says that the Government should have foreseen and prepared for the war. This might or might not have been, according to the temper of the North. We admit it should have made preparations for the contest; but did the North make more elaborate preparations than we did? Neither its finance, nor its war levys, at the beginning of the war, showed a more correct appreciation of the grandeur of the combat than our own. We made the best preparation for defence that we could do without a demand on the strength or resources of the people. This was the object of both, as it is of all Governments. "The prophet of the past" may see now that there should have been a larger and an earlier preparation, but it being proportioned to the degree of invading force with which we were threatened, no statesman we think can be reproached for not having prepared for an emergency which might not have arisen, or for not having made exertions which would have been superfluous in the event no corresponding manifestation by the invaders should have rendered it necessary. 2. Our financial system. The author of the article thinks the taxation of the Confederate Congress should have been heavier and more prompt. He is of opinion that the Government should not have relied on loans. Now, taxation in a State at ease, and in full production, is one thing, and the collection of taxes in a country

disturbed and invaded by a foreign foe, is another. We did enjoy the advantage of a direct tax. We had a tax on kind—a tithe, like the Levites. There never was a tax more onerous, more expensive; there never was a tax that allowed more injustice or caused more disaffection. The Government of the United States purchased all such supplies with its paper money. We levied this tax because the money of the Government had lost its power of purchase, and the people had no other. We cannot help thinking the critic too severe—not too severe on the authorities, but on the necessities of the country. Certainly, this sample of a direct tax did not increase the popularity of the Government, nor aid the people in meeting its requisitions. The Confederate Government was compelled to take the money where it could be obtained—in the cities, among the richer planters, from the domestic and foreign capitalists. It follows, then, that the collection and transmission of taxes throughout a country cut apart by hostile armies was not so easy in fact as in the philosophers' closet. It chances that the material for vindicating the Confederate Government from a charge of financial incapacity is found in the financial history of the United States. That Government increased its duties on foreign imports; it enlarged its currency, and struck all local currency out of circulation; it issued bonds and bound itself for liberal interest. From all these resources it raised the means to fight the war. It is true, the currency, and to some extent the public securities, went down; still, it answered to fight a war of conquest. Why should not the same system have been adopted in a war of defence? The Federal Government triumphed with a tariff of forty or fifty per cent; a circulation of seven or eight hundred millions, with specie at a premium of more than an hundred per cent., with securities which, genuine and counterfeit, are estimated

by Hon. Thad. Stevens at \$400,000,000. Then, the causes which the article thinks contributed to our defeat did not prevent the conquerors from succeeding. The great discontent of the author seems to be that the Confederacy did not resort to free trade and discard altogether the duties on imports. He even makes some personal flings at statesmen who accepted the necessity of the hour: "Mr. Toombs, especially, seemed incapable of imagining the expediency of any other mode of raising a revenue, even under the present peculiar condition of affairs; moreover, his mind was still abused by the fallacy of incidental protection, as beneficial to certain interests in Georgia. The South Carolina members displayed sounder views, urging low duties as politic toward foreign nations, not obstruction to commerce, and proportionally productive of more revenue than higher imposts. These gentlemen had been too well schooled by a great master of political and economical science to be quite ignorant on this subject; yet they proved to have been but half taught." We doubt whether if this great master had been on earth himself, he could have done much better with the resources on hand than the Confederate Congress did. We do not believe he made any formal propositions to abandon the collection of duties altogether. He insisted that they should be laid for revenue exclusively, and for an economical expenditure.

3. Diplomacy. The writer is very severe upon the foreign representatives of the Confederacy. Perhaps they might have been better chosen. They were principally, however, professors of the very doctrines urged by the writer. Mr. Mason and Mr. Slidell were, we think, in full political fellowship with the dominant school of Southern politics. Perhaps the latter had a dispensation in regard to the duties on foreign sugar, or a grant of swamp lands; but such dispensations were not uncommon, and did not affect the party

membership of the indulged. The writer thinks that free trade would have proved the most powerful agent the Confederacy "could command, and, unlike the solicitations of its diplomatic agents, had no tendency to degrade the country in the eyes of the world." The diplomatic errors of the Government seem to have been confined to a disregard of this specific; but we are not told what else they could have done to effect an intervention by other powers.

We shall, in the succeeding number, refer to the other blunders alleged by the Confederate Government. We shall in the sequel state succinctly and respectfully the causes which, in our opinion, prevented success, and we shall endeavor to suggest the policy which would, in our opinion, have secured it.

OUR subscribers and advertisers will have observed that we have combined the May and June numbers of the *Review* under one cover. They will also observe that neither of these numbers are as full as the *Review* usually is. Advertisers will particularly notice that they receive but one advertisement for the two months, when they are entitled to two. The removal of the *Review* from New York involved a delay which it was impossible to recover otherwise than by the plan adopted. It is intended to bring out the *Review* in future on or before the 1st of each month. This union of the two numbers was necessary to that important object. Every obligation to subscribers and advertisers will be faithfully complied with. Any deficiency in the average quan-

tity of matter in either of the numbers will be made good to the subscribers in the future numbers. Advertisers will have an additional insertion of their advertisement at the end of the term, or a discount in the price, at their option.

WHOLESALE GROCERIES, LIQUORS AND DRUGS IMPORTED.—Notwithstanding the rush to New York for various articles of foreign merchandise, it has given us great confidence to see and be satisfied that one grocery merchant could not be undersold. The returning tide of river commerce finds such houses as that of E. J. Hart & Co. prepared with an abundant stock of groceries and other articles advertised by them in this number of the *Review*, and we can assure all those who wish to make bills in their line that they will be found not only experienced but honorable merchants, who sell their goods at reasonable prices and verify their invoices with goods that come up to or surpass the samples.

HARDWARE AND AGRICULTURAL IMPLEMENTS.—The poets wrote of the iron age. It has come upon us, and we are all the better of it. Iron houses, iron ships, iron horses, and even iron soundboards to Knabe and other pianos. We are not ironical in saying we are all the better for this enduring feature of the age. Slark, Stauffer & Co., 71 Canal street, New Orleans, are

the missionaries and ministers of this practical era, as has been duly certified by one gold and six silver medals, bestowed upon them by our Directors of the Agricultural Fair of January, 1868, besides more than thirty first premiums. The time has now come when our planters must be delivered from the expense and dependence on free labor. This must be done here as elsewhere, by adopting all the improved implements of agricultural work. Now, Slark, Stauffer & Co. either have or can procure for you any implement or engine from a garden hoe up to an English or American steam plow. We cordially commend them to all our planter friends, who will find their wares and prices will verify our endorsement.

BOOK NOTICES.—We are indebted to Blelock & Co. for the "Commercial Traveler," one of Dickens's most pleasant stories. It is from the press of the Messrs. Peterson, of Philadelphia, who deserve infinite credit for having made this charming writer accessible to the poor, who have furnished so many of his best characters, as well as to the rich, who are taught to enjoy their wealth from his graphic descriptions of poverty.

"Mrs. Lirriper's Lodgings" is another volume from the same author and press, and entitled to the same commendation.

"The Black Dwarf," of Sir Walter Scott, is likewise popularized by the same publishers.